

Ongoing Monitoring Report, 2025

PFAS OMP - RAAF Base Williamtown

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Ongoing Monitoring Report, 2025

PFAS OMP - RAAF Base Williamtown

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List of Acronyms

Acronym	Term
ADWG	Australian Drinking Water Guidelines
AECOM	AECOM Australia Pty Ltd
AFFF	Aqueous Film Forming Foam
bgs	Below Ground Surface
BoM	Bureau of Meteorology
CSM	Conceptual Site Model
Defence	Department of Defence
DEMS	Demolition of Explosive Munitions Site
DoH	Department of Health
DSI	Detailed Site Investigation
EPC	Exposure Point Concentration
FFTA	Former Fire Training Area
FTF	Former Training Facility
FTP	Former Training Pad
FSANZ	Food Standards Australia New Zealand
GW	Groundwater
GWE	Groundwater Elevation
HEPA	Heads of Environment Protection Authority
HHRA	Human Health Risk Assessment
HWC	Hunter Water Corporation
LOR	Limit of Reporting
MD	Moors Drain
MW	Monitoring Well
NE	Northeast
NEMP	National Environmental Management Plan
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NSW	New South Wales
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
PCT	Plant Community Type
PFAS	Per- and Poly-Fluoroalkyl Substances
PFHxS	Perfluorohexanesulfonic Acid

Acronym	Term
PFOA	Perfluorooctanoic Acid
PFOS	Perfluorooctanesulfonic Acid
PMAP	PFAS Management Area Plan
PPE	Personal Protective Equipment
QC	Quality Control
RAAF	Royal Australian Air Force
SA	Southern Area
SAQP	Sampling and Analysis Quality Plan
SD	Sediment
SS	Surface Soil
SW	Surface Water
SWL	Standing Water Level
TDI	Tolerable Daily Intake
TOC	Top of Casing
WTP	Water Treatment Plant

List of Units

Units	Term
°C	Degrees Celsius
µg/L	Micrograms per litre
µS/cm	MicroSiemens per centimetre
g	Gram
km	Kilometre
L	Litre
m	Metre
mAHD	Metres relative to Australian Height Datum
mbTOC	Metres below Top of Casing
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per litre
ML	Megalitre
mm	Millimetre

Executive Summary

Introduction

AECOM Australia Pty Ltd (AECOM) was engaged by the Department of Defence (Defence) to implement the Ongoing Monitoring Plan (OMP) for monitoring of per- and poly-fluoroalkyl substances (PFAS) at the Royal Australian Air Force (RAAF) Base Williamtown (the 'base') in New South Wales (NSW).

Objective

The objective of implementing the OMP is to provide information on changes in location and concentrations of PFAS within the environment. The data is required to assist risk management decisions by Defence and NSW State Government agencies to protect human health and the environment.

Monitoring Scope

AECOM completed two monitoring events of groundwater, surface water and sediment between January 2025 and December 2025 (the 'monitoring period') in accordance with the Sampling and Analysis Quality Plans (SAQP) (AECOM, 2025a & 2025d). This monitoring targeted PFAS associated with the fire-fighting foams used at the base historically.

Monitoring Results

Groundwater

As specified in the OMP, groundwater sampling in this monitoring period focused on locations at identified PFAS source areas on-base, locations at the base boundary, and off-base within the Management Area, as defined by the NSW Government.

Overall, the concentrations of PFAS in groundwater were similar to those reported in previous monitoring periods. At several on-base PFAS source areas, 'decreasing' trends were observed, indicating that targeted treatment of on-base source areas continues to reduce the amount of PFAS in the environment.

New maximum concentrations were observed at some off-base monitoring locations in the Primary Management Zone south of the base suggesting the core of the plume continues to migrate away from source areas in the Central Region of the base towards Fullerton Cove. Statistically increasing or decreasing trends were observed in a number of locations on-base and across the Williamtown Management Area, however as concentrations continue to remain within the same order of magnitude as historical results they are not considered to be significant in the context of the conceptual site model. With the exception of a minor refinement in the inferred eastern extent of the plume near Salt Ash (due to the adopted lower laboratory limit of reporting) the shape of the groundwater plume remains relatively consistent with the extents identified during the 2017 Detailed Site Investigation (AECOM, 2017a).

First-time detections of PFAS were reported at eight locations either within the off-base Broader Management Zone and/or outside of the Williamtown Management Area. These first-time detections were largely attributed to the adoption of a lower level of laboratory reporting, rather than being indicative of plume migration. New exceedances of human health screening criteria and/or ecological screening criteria were reported in nine off-base groundwater locations within the Primary Management and Secondary Management Zones. However, the findings were reviewed against OMP triggers and were found to present no additional risks to people or the environment.

Surface Water and Sediment

Co-located surface water and sediment samples were collected on-base and off-base during the monitoring period, and focussed on identified PFAS-source areas, the base boundary and key drains within the off-base Management Area.

PFAS concentrations were similar to historical results. The highest PFAS concentrations were associated with on-base source areas and drains flowing from the base, including those in the Primary Management Zone where groundwater enters into surface water drains.

Concentrations of Perfluorooctanesulfonic Acid+ Perfluorohexanesulfonic Acid (PFOS+PFHxS) and Perfluorooctanoic Acid (PFOA) remained within or the same order of magnitude of historical ranges with no consistent trends observed in the dataset and present no further risks to people or the environment.

Conceptual Site Model and Risk Summary

The Conceptual Site Model (CSM) is used to describe the ways that PFAS moves from source areas on the base into the surrounding environment. Specifically, the CSM describes the links between PFAS sources, transport pathways, and possible exposure scenarios. The CSM was developed during the investigation stages and the most recent CSM is summarised in the PFAS Management Area Plan (PMAP) (Defence, 2023b).

The risk profile was established by the Human Health Risk Assessment (HHRA) (AECOM, 2017b) and Ecological Risk Assessment (AECOM, 2018) and is summarised in the PMAP (Defence, 2023b).

While there have been localised changes in PFAS concentrations during the monitoring period, the risk profile and CSM associated with exposure to PFAS in groundwater, surface water and sediment have not changed.

What is an 'order of magnitude'?

This refers to something decreasing or increasing by multiples of ten. For instance, an increase from 10 to 100 is an order of magnitude increase. When assessing changes in PFAS concentrations at an individual location, all concentrations are considered when determining trends, but order of magnitude changes are discussed separately as they represent a significant change in concentrations from what was reported in the previous event.

If a change is close to established health or environmental criteria, it will also be considered significant.

Remediation Progress

Defence continued remediation actions at the base to reduce PFAS mass discharge across the base boundary, in accordance with the PMAP (Defence, 2023b). During the monitoring period:

- The three water treatment plants on-base removed approximately 4.1 kg of PFAS from the environment (groundwater and surface water)
- The decreasing trends in groundwater concentrations at selected wells in the northern portion of the Western Region is likely to be attributable to the soil remediation and ongoing groundwater treatment at the former fire training area
- The former fire training area water treatment plant in the Western Region ceased operation on 14 November 2025. The plant was upgraded and the extraction was moved to the southern boundary within the Western Region to target the PFAS plume that originated from the former fire training area. While new maximum and/or increasing concentrations of PFAS have been identified in groundwater in the Western Region, the newly commissioned Western Region pump and treat system will aim to minimise the mass of PFAS migrating beyond base boundary in groundwater.
- Defence is also planning to implement additional management actions to target the central plume, including a pump and treat system (scheduled to be installed in late 2026) at Cabbage Tree Road which will aim to reduce the PFAS mass entering the receiving environment at Fullerton Cove.
- Investigations at the former and current fire station (Facility 165) and the Eastern Region were completed, the findings of which are being used to inform remedial planning in 2026
- The investigations for the in-ground permeable barrier to trial the treatment of groundwater commenced along the southern edge of Lake Cochran
- The investigations along Dawsons Drain commenced, looking at quantifying the contribution of PFAS from groundwater from the Western Region to surface water from Lake Cochran to Dawsons Drain
- Whilst remediation progress continues across the base, the management of risks to PFAS continues to be undertaken in accordance with the actions outlined in the PMAP.

1.0 Introduction

AECOM Australia Pty Ltd (AECOM) was engaged by the Department of Defence (Defence) to implement the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) at Royal Australian Air Force (RAAF) Base Williamtown (the 'base') in New South Wales (NSW). The location of the base and surrounding areas is shown in **Figure F1** in **Appendix A**.

The monitoring targeted PFAS in a range of environmental media at selected locations on-base and in surrounding off-base areas, including the Management Area as defined by the NSW State Government (**Figure F1** in **Appendix A** and NSW Government released figure in **Appendix D**).

In order to meet the objectives of the OMP, the monitoring was undertaken in accordance with the *Sampling and Analysis Quality Plan* (SAQP) (AECOM, 2025a and 2025d). Concurrent programs of work being delivered by Defence outside of this monitoring program were also considered. A summary of these ancillary works is presented in **Section 6.0**.

This Ongoing Monitoring Report (OMR) has been prepared in accordance with the *Ongoing Monitoring Program Reporting – Guidance* (Defence, 2024) based on monitoring data collected between January 2025 and December 2025 (the 'monitoring period').

1.1 Objective

The objective of the monitoring program is to identify and evaluate:

- spatial and temporal (including seasonal) variability of PFAS in the environment
- changes to sources, transport pathways and/or receptors, described as a Conceptual Site Model (CSM) for the base
- whether risks to human and ecological receptors require review
- the influence that risk management activities at the base, as outlined in the PFAS Management Area Plan (PMAP) (Defence, 2023b) have had on PFAS in the environment
- whether the identified changes trigger an action and or review.

The data collected may be used to inform where new risk management actions may be required, or to support a determination that remediation has been completed so far as reasonably practicable.

1.2 Scope

The scope of works for this OMR included assessing changes to the distribution of PFAS over the monitoring period and if these changes have implications for the understanding of the CSM and the associated risk profile. This included the evaluation of data reported during the monitoring period in the following reports which are included in **Appendix H**:

- *Sampling Event Report, April 2025, PFAS OMP – RAAF Base Williamtown*. 29 August 2025 (AECOM, 2025c)
- *Sampling Event Report, October 2025, PFAS OMP – RAAF Base Williamtown*. 15 December 2025 (AECOM, 2025e).

The OMR also considers historical OMP data and PFAS data collected outside the OMP.

2.0 Site setting

2.1 Site description

The site identification and setting are summarised in **Table 1** below:

Table 1 Site identification and setting summary

Element	Description
Site ID	0908
Site location	The base is located at Medowie Road, approximately 15 km north of the Newcastle NSW central business district and is located in the Port Stephens local government area, as shown in Figure F1 in Appendix A .
Regional meteorology	The Bureau of Meteorology (BoM) Williamtown RAAF weather station (number 061078) has recorded data since 1942. Review of the BoM data for the monitoring period indicates the following: - mean monthly maximum temperatures varied from 17.5°C in June 2025 to 28.9°C in December 2025 - mean monthly minimum temperatures varied from 7.9°C in June and July 2025 to 19.1°C in March 2025 - The rainfall recorded at the base was 1,721.8 mm during the monitoring period. Assessment of rainfall during the monitoring period against the mean rainfall is presented in Section 6.4. In summary, the recorded rainfall was noted to be above the mean for the majority of the monitoring period (including during the annual event in April 2025), but lower during the last three months of 2025 (covering the biannual event in October 2025). - The mean rainfall for all years on record was 1,134.4 mm per annum. The lowest recorded annual rainfall was 541 mm in 1980, and the highest annual rainfall was 1,794 mm in 1963. The highest monthly rainfall generally occurs between January and June (averaging 115 mm per month), with the lowest rainfall in July to December (averaging 74 mm per month) (BoM, 2026).
Topography and hydrology	The base and Management Area are situated in a generally low-lying area associated with the Lower Hunter River. The region is characterised by low sand dunes, sand sheets and estuarine mud flats. The overall change in elevation across the base and Management Area is less than 10 m (AECOM, 2017a). The base is surrounded by an interconnected network of drains, rivers, estuaries, reservoirs and coastal waterbodies within the catchment areas of both the Hunter River and Port Stephens estuary. The major elements of the regional surface water drainage network include: - Dawsons Drain, the Fourteen Foot Drain and the Ten Foot Drain, which are located to the south of the base and drain into Fullerton Cove (Figure F1 in Appendix A). - Moors Drain and Tilligerry Creek, which are located to the east and southeast of the base and drain to the northeast into the Tilligerry Creek arm of Port Stephens (Figure F1 in Appendix A). Additionally, the following regional waterbodies are present in the area:

Element	Description
	- Grahamstown Dam located approximately 2 km northwest of the base. - Campvale Drain located 1.5 km to the north of the base. - Tilligerry Creek estuary located approximately 6 km to the east. - Port Stephens located approximately 10 km northeast. - Fullerton Cove located approximately 3 km to the southwest. - Hunter River Estuary located approximately 7 km southwest and west. - Pacific Ocean located approximately 4.5 km to the south/southeast.
Geology and hydrogeology	The geology of the base and Management Area comprises unconsolidated sands (Tomago Sand Beds and Stockton Sand Beds) underlain by estuarine sediments (Tilligerry Mud Member). The hydrogeology of the area is characterised by two unconfined sand aquifers: - Tomago Sand Beds aquifer located northwest of Tilligerry Creek. - Stockton Sand Beds aquifer located between Tilligerry Creek and the Newcastle Bight. The Tomago Sand Beds aquifer is highly permeable and readily infiltrated by rainwater owing to the nature of the relatively coarse-grained aquifer material and shallow water table. The aquifer in the Stockton Sand Beds is approximately 10 to 20 m thick and is composed primarily of sands. PFAS source areas on the base are located on the Tomago Sandbeds and PFAS migration in groundwater appears to occur principally within that aquifer. Further migration of the PFAS plume appears to be restricted by the north-westerly groundwater flow of the Stockton Sandbeds and by the presence of the confining effects of the Tilligerry Mud Member. While groundwater beneath the base and surrounds is considered to be a largely continuous, unconfined aquifer, the hydrogeological conceptual model considers the following depth intervals to evaluate the vertical distribution of PFAS: - Shallow groundwater screened primarily between 4-6 metres below ground surface (m bgs). - Intermediate groundwater screened between 10-14 m bgs. - Deep groundwater greater than 16 m bgs.
Vegetation	The base is bounded by the Tilligerry State Conservation area to the northwest and east. The base and immediate surrounding areas host a mix of remnant and dense native vegetation with some non-native species which extends some 15 km to the east of the base and some 13 km to the west. The heavily vegetated areas that surround the base to the north, east and west are crossed by tracks, roads, transmission lines and other linear infrastructure. The base is part of a broader low-lying marsh ecosystem and is often inundated, particularly to the north of the base which is naturally lower lying. The Hunter, Central & Lower North Coast Vegetation Classification & Mapping Project Volume 1: Vegetation Classification technical report, report prepared by HCCREMS (2009) notes the following plant community type (PCT)/vegetation groups on-base and in surrounding areas:

Element	Description
	- PCT 1707: Banksia oblongifolia – Hakea teretifolia – Leptocarpus tenax – Lepyrodia scariosa wet heath on sandstone ranges of the Central Coast. - PCT 1647: Red Bloodwood – Smooth-barked Apple heathy woodland on coastal sands of the Central and lower North Coast. - PCT 1651: Parramatta red gum – Fern-leaved banksia – Melaleuca sieberi swamp woodland of the Tomaree Peninsula. - PCT 1721: Swamp Mahogany – Broad-leaved Paperbark – Saw Sedge – Yellow Marsh Flower swamp forest of coastal lowlands. - PCT 1650: Parramatta Red Gum – Rough-barked Apple – Swamp Mahogany – Paperbarks swamp forest on lowlands of the Central Coast. The condition of remnant vegetation on-base (and surrounds) appears to primarily be good with little disturbance. Some areas of regeneration are evident on-base.
Current and Previous Land Use (on-base)	The base has been an active Defence base since 1941 and serves as the headquarters to both the Air Combat Group and the Surveillance and Response Group. In 2014, it was designated as the home base for Australia's F-35 Joint Strike Fighters. Activities undertaken on-base include training of Defence personnel in fire-fighting techniques, for which fire-fighting foams are used. PFAS were an active ingredient in legacy aqueous film forming foam (AFFF) used at the base since the early 1970s, which were phased out in 2004. Defence transitioned to Ansulite foam, which does not contain Perfluorooctanesulfonic Acid (PFOS) and Perfluorooctanoic Acid (PFOA) as an active ingredient, only in trace amounts. Ansulite is only used by Defence in emergency situations where human life is at risk, or in controlled environments to test equipment.
Current and Previous Land Use (off-base)	Off-base land uses comprise rural and semi-rural settlements at Fullerton Cove and Salt Ash, small commercial properties and the Salt Ash Primary School. Tilligerry State Conservation area, managed by National Parks and Wildlife Service and occupying approximately 7.6 km², immediately borders the base to the west, north and east. Hunter Water Corporation (HWC) pumping stations and groundwater extraction bore fields are located to the west, north and east of the base.

2.2 Management Area

The boundary of the initial Investigation Area was defined by the NSW Government in late 2015. Following the publication of the Environmental Site Assessment report in December 2017, the NSW Government replaced the Investigation Area with the Williamstown Management Area as described below.

The Management Area comprises three zones described below and illustrated on the NSW Government map presented in **Appendix D**. The NSW EPA has defined the zones as follows:

- Primary Management Zone** – this area has significantly higher levels of PFAS detected and directly receives PFAS-contaminated water migrating from the base. Therefore, the strongest precautionary advice applies.
- Secondary Management Zone** – this area has some detected levels of PFAS.
- Broader Management Zone** – the topography and hydrology of the area means PFAS detections could occur now and into the future.

The NSW Government noted that each zone has tailored precautionary advice for residents to minimise exposure to PFAS originating from the base.

2.3 PFAS source areas and distribution

PFAS source areas can be primary or secondary. Primary sources are generally areas of PFAS contamination where AFFF was used or stored, for example a fire training area. Secondary sources are areas where PFAS accumulates and then continues to feed into the environment, such as Lake Cochran. PFAS can travel from a source to human or environmental receptors via surface water and/or groundwater. These are referred to as “migration pathways”.

The PMAP (Defence, 2023b) provides a list of the PFAS sources, and the migration pathways based on the natural catchments across the base and Management Area (**Figure F1 in Appendix A**), as follows:

- Western Region – characterised by the Former Fire Training Area (FFTA) source that is now remediated, and a PFAS groundwater plume extending south away from the source through the former Demolition of Explosive Munitions Site (DEMS) landfill. A substantial proportion of the western plume is still on-base. PFAS from the western plume is inferred to discharge to Dawsons Drain south of the base.
- Central Region – characterised by PFAS sources at the:
 - Former and Current Fire Station area, including the Former Fire Training Pad (FTP); Foam Testing Facility (FTF); and Current Fire Station (Facility 165), located centrally within the base
 - the Sewage Treatment Plant (Facility 410), located south of the base adjacent to Newcastle Airport
 - Lake Cochran, stormwater retention pond that receives surface water runoff from central portions of the base including the Former and Current Fire Station area.

PFAS groundwater plumes from these sources extend south across the southern base boundary. The concentrations of PFAS south of the base and north of Cabbage Tree Road were likely sourced from Lake Cochran, which was impacted when AFFF containing high concentrations of PFAS were still in use at the base. However, Lake Cochran is no longer considered a significant ongoing PFAS source to groundwater. PFAS in the central southern plume primarily discharges into Leary's and Dawsons Drain.

- Eastern Region – characterised by likely sources at the Trade Waste Treatment Plant (Facility 480) and the Former Fuelling Area. The PFAS impacts in the Eastern Region are primarily due to groundwater entering the drainage network and discharging to Moors Drain, which flows to Tilligerry Creek. Given that the primary pathway east of the base is via Moors Drain and groundwater flow is to the south, the groundwater plume to the east of the base is not as developed as the western and central plumes.

The dominant regional groundwater flow direction at the base is to the south and southwest, with groundwater in the Tomago Sand Beds aquifer flowing towards Fullerton Cove in the western portion of the base, while also flowing in a south easterly direction in the eastern portion of the base. Further south, groundwater from the Stockton Sand Beds aquifer flows in a north westerly direction towards Tilligerry Creek. The PFAS plumes originating from the multiple primary sources in the Western and Central Regions are merging and moving southward.

PFAS is also present in groundwater to the east of the base, including at Salt Ash, inferred to be related to PFAS in surface water migrating along the drain network (Moors Drain and associated tributaries) before infiltrating to groundwater.

2.3.1 Groundwater impact

The groundwater flow patterns broadly reflect the regional drainage. Groundwater levels below sea level in the area are likely to reflect groundwater depressurisation caused by the deeper drainage features such as the Fourteen Foot Drain and Ten Foot Drain.

The lateral hydraulic gradient at and surrounding the base ranges from about 0.001 metres per metre (m/m) to about 0.0025 m/m (AECOM, 2017a). The gradient is indicated to be slightly steeper on-base

(0.0025 m/m) and flattens out towards a natural depression running in a southwest to northeast direction, south and east of the base (0.001 m/m).

The direction of the vertical hydraulic gradient varies across the base area. This may be due to the degree of interaction with surface water, with gaining surface water bodies associated with upward gradients and losing surface water bodies associated with downward gradients. Seasonal groundwater level fluctuations have been noted historically.

The two main primary sources of PFAS in surface water and groundwater at the base are the FFTA (within the Western Region); and the former FTP (within the Central Region).

Historical releases during training at the FFTA have resulted in a groundwater plume extending south from the FFTA. PFAS-impacted groundwater likely upwells into Dawsons Drain.

Remediation measures undertaken at the FFTA (including soil excavation and installation of a groundwater extraction and treatment system) have resulted in detachment of the plume from the source, however, the detached plume is still migrating towards the southern base boundary. In January 2026, Defence commenced extracting groundwater along the southern boundary of the base to target this plume (refer to **Section 6.1**) as per the PMAP (Defence, 2023b).

Historical releases at the FTP are likely to be the source of the PFAS impacts to surface water in the Central Region (surface drains on-base, water in Lake Cochran, and Dawsons Drain) as well as the groundwater plume extending more than 500 m off-base to the south. The Central Region plume (southern plume) discharges to the surface in Leary's Drain which eventually discharges to Fullerton Cove.

It is also likely that the FTP is a potential contributing source for both the groundwater plume in the Eastern Region, and discharges of PFAS in surface water to Moors Drain.

The discharge of PFAS in groundwater across the base boundary in the Eastern Region has been estimated to be relatively minor (less than 1% of total PFAS discharge in groundwater leaving the base). In accordance with the PMAP (Defence, 2023b) Defence is currently undertaking characterisation of PFAS impacts in surface water and groundwater within the Eastern Region to refine understanding of PFAS source areas and migration mechanisms.

2.3.2 Surface water impact

The base is located within estuarine and coastal wetlands that have been reclaimed via a network of drains constructed to convert low lying swampy land into dry land for improved land use. These drains have provided pathways for the migration of PFAS and substantially influenced its current distribution.

The following two key drains collect surface and drainage water from the base and discharge towards the topographic depression running southwest to northeast beyond the southeastern base boundary (refer to **Figure F3** in **Appendix A**):

- Dawsons Drain:
 - Drains the western portion of the base towards the south in direction of Fullerton Cove (a shallow embayment of the nearby Hunter River). Dawsons Drain receives a significant amount of runoff from parts of the base with multiple known PFAS source areas. Much (but not all) of this water accumulates in Lake Cochran before overflowing to Dawsons Drain.
 - Lake Cochran is a man-made stormwater retention basin that, owing to its depth, intersects shallow groundwater in the southern area of the base. Modelling has supported the assumption that Lake Cochran has historically contributed PFAS-impacted surface water to groundwater.
 - Dawsons Drain flows south from Lake Cochran, passes under Cabbage Tree Road, and discharges into the Fullerton Cove Ring Drain, which discharges to Fullerton Cove via tidal gates. South of the base, Dawsons Drain likely receives upwelling groundwater containing PFAS from the western and central plumes. Dawsons Drain is unlined and provides a connection between surface water and shallow groundwater.

- Moors Drain:
 - Drains the eastern portion of the base via three channels which form two principal branches (Northern Branch and Southern Branch), and merge approximately 1 km east of the base. This drain flows for approximately 7 km northeast to discharge via tidal floodgates into the Tilligerry Creek Estuary, which forms part of Port Stephens. Moors Drain receives runoff from the eastern part of the base and is a losing drain (i.e., drain water infiltrates to groundwater) along much of its length. It appears to contribute to secondary PFAS groundwater impacts to the northeast of the base towards Salt Ash and then to Tilligerry Creek Estuary.
 - It is understood that water flow from the base drainage network into Moors Drain only ceases following a prolonged dry period when groundwater levels drop due to limited infiltration and recharge. Moors Drain is unlined and provides a direct pathway to the shallow groundwater.

3.0 Sampling plan and deviations

3.1 Locations, events, analysis

The SAQP outlines the proposed locations to be sampled, schedule, sampling rationale, sampling methodology for each of the media and the required analysis as per the requirements of the OMP (Defence, 2023a). It prescribes biannual (every six-months) groundwater, surface water and sediment sampling at the base and Management Area, and biennial (every second year) aquatic biota sampling in Fullerton Cove. For this monitoring period, in addition to the biannual sampling, the SAQP prescribed sampling of a number of groundwater locations on an Ad Hoc frequency, which was then reviewed after each sampling event. The biota sampling was not in scope for this monitoring period, however, will be carried out during the next (2026) monitoring period.

The sampling events were timed to target different rainfall periods, based on historical rainfall data recorded at the BoM weather station (061078) located at the base. In general, historical rainfall data indicates the greatest rainfall occurs in late summer and autumn with the least rainfall occurring in winter and spring. In part, this trend was observed during the monitoring period with rainfall significantly above the historical average observed in April 2025 and especially in May 2025 (more than 4 times the long-term average) (refer to **Section 6.4**). However, significantly higher than average rainfall total was recorded also in winter, with July and August 2025 experiencing totals of 2 to 3.5 times the long-term average.

A summary of the two OMP sampling events completed during the monitoring period is provided in **Table 2** below. The list of locations that were planned to be sampled over the monitoring period are presented in **Section 7.1.1** in **Table 8**.

Some locations could not be sampled due to impediments encountered during the sampling events or other reasons, which are described in **Section 3.2**.

A number of groundwater sampling locations, where historical PFOS concentrations were consistently reported below or close to the laboratory limit of reporting (LOR), were selected to be analysed for PFAS at low level laboratory LOR, to allow for assessment against the current Australian Drinking Water Guidelines (which were in draft at the time of preparing the SAQP for the April 2025 event).

Table 2 Summary of monitoring events

Monitoring Event (Sampling dates) <i>Relevant SAQP</i>	Total Locations in Scope as per SAQP	Total Locations Sampled in Event	PFAS Analysis Limit of Reporting (LOR) per Location as per SAQP
April 2025 Annual sampling event (1-17 April 2025, 26-27 May 2025, 10 June 2025) <i>SAQP Rev B: AECOM, 2025a</i>	136 GW + 4 GW Ad Hoc + 10 GW Contingency	127 GW + 2 GW Ad Hoc + 10 GW Contingency	80 GW at Standard LOR 70 GW at Low Level LOR
	25 SW	25 SW	25 SW at Standard LOR
	26 SD	26 SD	26 SD at Standard LOR
October 2025 Biannual sampling event (7-20 October 2025) <i>SAQP Rev D: AECOM, 2025d</i>	74 GW + 12 GW Ad Hoc	61 GW + 10 GW Ad Hoc	37 GW at Standard LOR 49 GW at Low Level LOR
	25 SW	24 SW	25 SW at Standard LOR
	26 SD	25 SD	26 SD at Standard LOR

Notes: GW = groundwater, SW = surface water, SD = sediment.

The SAQP is routinely updated prior to each sampling event based on findings from the preceding sampling event. SAQP revisions used throughout the monitoring period are listed in **Table 2**. The SAQP (AECOM, 2025d) prepared ahead of the October 2025 biannual sampling event has been included in **Appendix G**.

3.2 Deviation from the SAQP

Deviations from the scope outlined in SAQP for the monitoring period are summarised in **Table 3** below.

Table 3 Deviations from SAQP during the monitoring period

SAQP Requirement	Sampling Event Deviation	Impact of deviation on dataset
Annual Sampling Event – April 2025		
Samples, and associated field parameters, to be collected from 136 scheduled annual groundwater sampling locations.	MW238D, MW238S, POT085 and POT236 (groundwater sampling locations at private residential properties) were not sampled as access approval from property owners was not received within the sampling period. MW252S (located on Hunter Water land) was not sampled due to flood water covering the monitoring well. The location was visited on separate occasions during the sampling event; however, the flood water had not subsided. MW104D, MW104S, MW184D, and MW184S (located at Newcastle Airport) were not sampled as they were destroyed by construction works.	The lack of sampling data at MW238D and MW238S is not considered to present a significant data gap, as a nearby monitoring well (MW139 to the southwest) was able to be sampled. The lack of sampling data at POT085 and POT236 could represent a data gap, given these locations have not been sampled since 2023. However, it is noted that historical data at these locations show stable PFAS concentrations since 2016, either consistently below the laboratory LOR (POT085) or consistently above the adopted drinking water guidelines (POT236). The lack of sampling data at MW252S is considered a potential data gap as there is limited coverage in this area to the east of the base. However, it is noted that historical data at this location shows PFAS concentrations decreasing from 2017, while still consistently above the adopted drinking water guidelines for PFOS and Perfluorohexanesulfonic Acid (PFHxS). The lack of sampling data at MW104D, MW104S, MW184D, and MW184S is considered a potential data gap as there is limited coverage to the south of the base. However, it is noted that historical data at these locations show PFAS concentrations being stable (for MW104S) or decreasing (for MW104D, MW184S, MW184D) from 2017, and consistently above the adopted drinking water and recreational guidelines.
Field parameters and gauging data to be collected from all scheduled groundwater sampling locations (monitoring wells).	MW406 was sampled however due to an equipment error, the field parameters and gauging data taken at the time of sampling were lost.	The lack of gauging data and water quality parameters at MW406 is not considered to be a significant data gap given that historical field data has been collected and samples for PFAS analysis were collected.
Gauging data to be collected from 29 selected monitoring wells for the	MW162D was unable to be gauged as the gatic lugs and j-cap were jammed. However, the location was revisited and	The lack of gauging data during the gauging round at MW162D is not considered to be a significant data gap, as the other wells were able to be gauged allowing sufficient coverage for the groundwater elevation plan.

SAQP Requirement	Sampling Event Deviation	Impact of deviation on dataset
targeted gauging round.	repaired, enabling gauging and sampling.	
Samples, and associated field parameters, to be collected from 14 planned ad hoc and contingency groundwater sampling locations.	MW266D (groundwater monitoring well located on residential property) was not sampled as the gatic bolts were rusted and the well could not be accessed. MW165 (groundwater monitoring well on the road verge) was not sampled as the well could not be located due to overgrown grass.	The lack of sampling data at MW165 is considered to be a potential data gap given the location provides coverage for the boundary of the Broader Management Zone to the east of the base. It is noted that historical data at this location (from 2016 to 2019), show PFAS concentrations below the standard laboratory LOR. The lack of sampling data at MW266D is not considered a significant data gap given the nearby shallow well (MW266S) was able to be sampled.
All groundwater results to be screened against the drinking water criteria presented in the PFAS NEMP (HEPA, 2025).	In June 2025, the National Health and Medical Research Council (NHMRC) released updated drinking water guidelines for PFOS, PFHxS, PFOA and PFBS. As a result, AECOM adopted these revised drinking water criteria for this sampling event, superseding the drinking water criteria (HEPA, 2025) presented in the SAQP (AECOM, 2025a) and in the OMP (Defence, 2023a).	The revised drinking water screening criteria for PFOS is 0.008 µg/L, which is below the standard laboratory LOR (0.02 µg/L). In anticipation of the release of the updated NHMRC guidelines following the April 2025 event, AECOM scheduled selected samples (from locations where concentrations were historically either below the laboratory LOR or below the former drinking water screening criteria) for low level PFAS analysis. A number of groundwater samples were also scheduled for standard laboratory LOR analysis as per the SAQP (AECOM, 2025). For these locations (MW108D, MW134D, MW134I, MW240D, MW245D, MW317D, MW340S, and MW406), the LOR for PFOS was above the updated ADGW (NHMRC, 2025). Therefore, samples with concentrations reported below the standard laboratory LOR were unable to be compared to the updated drinking water criteria.
Biannual Sampling Event – October 2025		
Samples, and associated field parameters, to be collected from 74 scheduled biannual groundwater sampling locations.	MW238D, MW238S, POT085 and POT236 (groundwater sampling locations at private residential properties) were not sampled as access approval from property owners were not received within the sampling period. MW107D, MW107S, MW130D, MW130S, MW252S, MW280S, MW315D, MW315S (located on Hunter Water land) were not sampled due to flood water covering the monitoring wells. The locations were	The lack of sampling data at MW238D and MW238S is not considered to present a significant data gap given that PFAS has not previously been detected in these wells, and as nearby monitoring wells (MW139 to the west southwest and MW178 to the southeast) were able to be sampled during this event. The lack of sampling data at POT085 is not considered to be a significant data gap as concentrations at this location have been consistently below the laboratory LOR since 2019, and the concentrations in the closest up-hydraulic gradient monitoring well (MW139) were below the laboratory LOR

SAQP Requirement	Sampling Event Deviation	Impact of deviation on dataset
	visited on separate occasions during the sampling event; however, the flood water had not subsided. MW185S (located at Newcastle Airport) was not sampled as it was covered by a stockpile.	during this event (consistent with previous results). POT236 has not been sampled since May 2023. Based on the understanding of the CSM, data from POT236 is not critical for monitoring the extent of the leading edge of the plume from the Central Region and is therefore not considered to be a significant data gap. The lack of sampling data at MW107D, MW107S, MW238D, MW238S, MW280S, MW315D and MW315S in the Western Region are not considered to present a significant data gap as monitoring wells MW139, MW241D and MW241S (cross gradient) and MW177, MW125D and MW125S (down gradient) were able to be sampled during the October 2025 event and all reported PFAS concentrations were within the historical range. The lack of sampling data at MW185S in the Central Region is not considered to be a significant data gap given that down-hydraulic gradient well MW220S (also on airport land) was able to be sampled with concentrations of PFAS reported within the historical range. The lack of sampling data at MW130D and MW130S in the Eastern Region are not considered to be a significant data gap as nearby, down-hydraulic gradient wells MW829, MW132I and MW132D were able to be sampled during the October 2025 event and PFAS concentrations were reported within the historical range at these locations. The lack of sampling data at MW252S in the Eastern Region is not considered a significant data gap as nearby monitoring well MW123 was able to be sampled during the October 2025 event and reported concentrations of PFAS within the historical range.
Samples, and associated field parameters, to be collected from 12 planned ad hoc groundwater sampling locations.	MW266D (groundwater monitoring well located on residential property) was not sampled as the gatic bolts were rusted and the well could not be accessed. Note that MW266D had been added to the scope as an ad hoc	The lack of sampling data at MW266D is not considered to be a significant data gap given that the purpose of sampling of these 12 ad hoc locations was to assess the extent of the groundwater plume due to concentrations below the updated NHMRC (2025) drinking water guidelines. Given that concentrations of PFOS and PFHxS have historically been above the updated guidelines at MW266D, it is likely that the concentrations would

SAQP Requirement	Sampling Event Deviation	Impact of deviation on dataset
	location and had not been sampled since 2021. MW165 (groundwater monitoring well on the road verge) was not sampled as the well could not be located due to overgrown grass. Note that MW165 had been added to the scope as an ad hoc location and had not been sampled since 2019.	continue to exceed the guidelines at this location. The lack of sampling data at MW165 is not considered to be a significant data gap as this is an ad hoc location and nearby monitoring wells (MW260D and MW260S to the west and MW262S to the northeast) were able to be sampled during the current round.
Samples, and associated field parameters, to be collected from 25 planned surface water sampling locations.	SW011 (Moors Drain surface water sampling location on Hunter Water land) was not sampled as the sampling location was unable to be accessed due to floodwaters. The locations were visited on separate occasions during the sampling event; however, the flood water had not subsided. SW001 was sampled, however due to an equipment error, the dissolved oxygen field parameter data taken at the time of sampling was lost.	The lack of sampling data at SW011 is not considered to present a significant data gap given that samples were collected upstream (SW009) and downstream (SW014) of this location during this event. Furthermore, it is noted that historical PFAS concentrations at this location have remained consistent (within same order of magnitude) since 2016, with temporal fluctuations. The lack of dissolved oxygen parameter data is not considered to be a significant data gap, given that historical field data has been collected.
Samples, and associated field observations, to be collected from 26 planned sediment sampling locations.	SD011 (sediment sampling location on Hunter Water land) was not sampled as the sampling location was unable to be accessed due to floodwaters. The locations were visited on separate occasions during the sampling event; however, the flood water had not subsided.	The lack of sampling data at SD011 is not considered to represent a significant data gap given that samples were collected upstream (SD009) and downstream (SD014) of this location during this event. Furthermore, it is noted that historical PFAS concentrations have remained consistent (within same order of magnitude) since 2016, with temporal fluctuations.

4.0 Quality Assurance and Quality Control

Data validation pertaining to the data in this report has been previously completed and discussed within the individual Sampling Event reports listed in **Section 1.2**.

Data validation procedures employed in the assessment of the field and laboratory Quality Assurance and Quality Control data, completed as per Section 3.2 of the SAQP (AECOM, 2025d), indicated that the reported analytical results are representative of the sample locations and that the overall quality of the analytical data produced is acceptably reliable (i.e. >95% of the data was suitable for use and DQIs passed acceptance criteria) for the purpose of the sampling event reports and this OMR.

All data collected during the monitoring period had been reviewed and uploaded to the Defence ESdat database in accordance with the Defence Contamination Management Manual (DCMM) requirements.

5.0 Assessment criteria

The adopted assessment (screening) criteria references national guidance in the form of PFAS National Environmental Management Plan (NEMP) (Heads of Environment Protection Authority Australia and New Zealand [HEPA], 2025), Defence estate and environmental strategies, and other PFAS-specific strategies and guidance. At the time of preparing this report, a number of national guidance documents were available in Australia and referred to, including:

- HEPA, 2025. PFAS NEMP Version 3.0. March 2025.
- Australian and New Zealand Governments (ANZG), 2026. Australian and New Zealand guidelines for fresh and marine water quality. Retrieved from <https://www.waterquality.gov.au/anz-guidelines> March 2026.
- Department of Health (DoH), 2017. Health Based Guidance Values for PFAS for use in site investigations in Australia. April 2017. This document is based on the works undertaken by Food Standards Australia New Zealand (FSANZ) in 2017 (FSANZ, 2017).
- National Health and Medical Research Council (NHMRC), 2019. Guidance on Per and Polyfluoroalkyl Substances (PFAS) in Recreational Water. August 2019.
- NHMRC, 2025. Australian Drinking Water Guidelines 6, 2011 - National Water Quality Management Strategy. Version 4.0 Updated June 2025.

The adopted PFAS screening criteria to assess the data collected as part of this monitoring period are presented in **Table 4** (human health criteria) and **Table 5** (ecological criteria), in line with the updated OMP (Defence, 2026).

It is noted that for the purpose of presenting data within this report, AECOM has focused on Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS) Perfluorohexanesulfonic acid (PFHxS), PFOS+PFHxS and Perfluorobutanesulfonic acid (PFBS) i.e., those PFAS for which there are either human health and/or ecological screening criteria.

At the time this report was prepared no assessment criteria were available in Australia for PFAS in sediments. This does not reflect a lack of concern about the significance of this pathway, but rather an acknowledgment of its complexity and the limitations of the ecotoxicological data that are currently available. This issue will be reviewed in subsequent reports. Additionally, the adopted PFAS screening criteria for aquatic biota have been omitted given that no biota sampling has been conducted in this monitoring period

Table 4 PFAS water criteria summary: Human health

Media	Pathway	Compound	Criteria	Comment/reference
Water – Groundwater	Drinking water	PFOS	0.008 µg/L	In June 2025, the NHMRC (2025) published revised drinking water criteria guidelines for PFOS, PFHxS, PFOA and PFBS. <i>All off-base groundwater results were screened against these criteria.</i>
		PFHxS	0.03 µg/L	
		PFOA	0.2 µg/L	
		PFBS	1 µg/L	
Water – Groundwater and Surface Water	Recreational use	PFOS+PFHxS	2 µg/L	The values presented in the PFAS NEMP (HEPA, 2025) are based on the NHMRC (2019) values. Given that groundwater at the base is extracted for irrigation purposes (post treatment), the recreational guidelines have been adopted to be protective of this water use activity. <i>All surface water and groundwater results were screened against these criteria.</i>
		PFOA	10 µg/L	

Table 5 PFAS water criteria summary: Ecological

Media	Pathway	Chemical	Criteria	Comment/reference
Water – Groundwater and Surface Water	Freshwater	PFOS	0.02 µg/L	The PFOS value is from the ANZG (2026). The PFOA value is from the PFAS NEMP (HEPA, 2025). ANZG (2026) recommends a conservative approach when applying default guideline values (DGVs) for bioaccumulative toxicants. As such the 99% species protection DGV has been selected for application to the slightly-to moderately-disturbed freshwater ecosystem. <i>All groundwater and surface water samples were screened against these criteria. Assessment of these criteria against groundwater results are relevant at the point of discharge.</i>
		PFOA	19 µg/L	

6.0 Contextual and ancillary information

6.1 PFAS remediation projects

The two main primary sources of PFAS in surface water and groundwater at the base are the FFTA (Western Region) and Facility 165 (Central Region). Releases during historical fire training activities at the FFTA have resulted in a groundwater plume extending south from the FFTA with the toe of the plume approximately 150 m south of the base boundary which likely upwells into Dawsons Drain.

Historical releases at Facility 165 are likely to be the source of the PFAS impacts to surface water in the Central Region (surface drains on base, water in Lake Cochran, and Dawsons Drain) as well as the groundwater plume extending from the Facility 165 to the area of Cabbage Tree Road, off-base to the south. It is also likely that the Facility 165 is a potential contributing source for the groundwater plume in the Eastern Region, as well as surface water PFAS discharges to Moors Drain.

Defence has implemented multiple remedial actions that were identified in the 2019 PMAP (Defence 2019), and subsequent updated 2023 PMAP (Defence 2023a), to manage potential PFAS exposure risks and progressively reduce PFAS migration from the base in surface water and groundwater.

The remedial actions completed at the FFTA (including soil excavation and installation of a pump and treat system) have resulted in detachment of the plume from the source (indicating effectiveness of the remedial actions for source containment); however, the detached plume is still migrating towards the southern Base boundary, ultimately discharging towards Fullerton Cove.

PFAS remediation projects conducted within the monitoring period consisted of groundwater extraction and treatment at two on-base water treatment plants and surface water treatment at one location. A summary of the three water treatment plants' (WTP) performance up to November 2025 is provided below in **Table 6**.

Table 6 Water Treatment Plant performance summary

Item	MD WTP	FFTA WTP ¹	SA WTP
Treatment commencement	June 2017	July 2018	May 2019
Volume treated since commencement (as of 11 November 2025)	1,082 ML	2,342 ML	1,373 ML*
Average total PFAS concentrations prior to treatment (since commencement) in µg/L (as of 11 November 2025)	3.91	16.92	12.41*
Average PFOS+PFHxS concentrations prior to treatment (since commencement) in µg/L (as of 11 November 2025)	3.42	15.65	11.07*
Average PFOS+PFHxS treated water concentration (since commencement) in µg/L (as of 11 November 2025)	< 0.01	< 0.01	< 0.01*
Approx. total PFAS removed since commencement (as of 11 November 2025)	3.71 kg	37.04 kg	17.06 kg*
PFAS removed in this monitoring period	0.31 kg	2.24 kg	1.55 kg*

Note:

¹ The FFTA WTP ceased operation on 14 November 2025 and upgraded to treat groundwater from the Western Region wellfield.

* Data for SA WTP is up to 24 September 2025, as WTP was offline pending upgrade / recommissioning.

Overall, approximately 4.1 kg of PFAS was removed from the environment (groundwater and surface water) via the three WTPs during this monitoring period. Further detail on each WTP is provided in the following sections.

6.1.1 FFTA Water Treatment Plant project

Defence continued the extraction and treatment of PFAS-impacted groundwater around the FFTA by a pump and treat system using ionic exchange resin treatment technology. Treated water is disposed by on-base irrigation.

The annual average PFAS concentration treated by the FFTA WTP is provided in **Figure 1** and the PFAS mass removed annually by the FFTA WTP is provided in **Figure 2**. The concentrations are those measured at the inlet of the water treatment plant. **Figure 1** shows that the average influent PFAS concentration in 2024-2025 was less than half of that when the plant commenced its operation in 2018. Defence implemented changes to the pumping regime following recommendations outlined in the Remediation Options Assessment (ROA) (Geosyntec, 2022)

As evident on **Figure 1** and **Figure 2**, pumping from the source area resulted in diminishing returns, with the PFAS mass removed reduced from around 8.5 kg between 2018 and 2019 to about 2.72 kg between 2024 and 2025.

The FFTA WTP ceased operation on 14 November 2025. The plant was upgraded to extract groundwater from the core of the FFTA plume via a new extraction wellfield (known as the Western Region wellfield) at the southern boundary of the base. This involved the movement of the extraction system of the FFTA WTP to the southern boundary. This change was made in response to the migration of the centre of mass of the plume beyond the capture zone of the current extraction system, as evidenced by the reduction in treatment concentrations and PFAS mass from the current extraction area.

It is noted that moving the pumping line to the southern boundary is also intended to capture the material that has historically migrated beyond the source area. The net reduction in PFAS discharge annually is anticipated to be in the order of 5 kg per annum. The commissioning of the new Western Region extraction wellfield occurred on 27 January 2026.

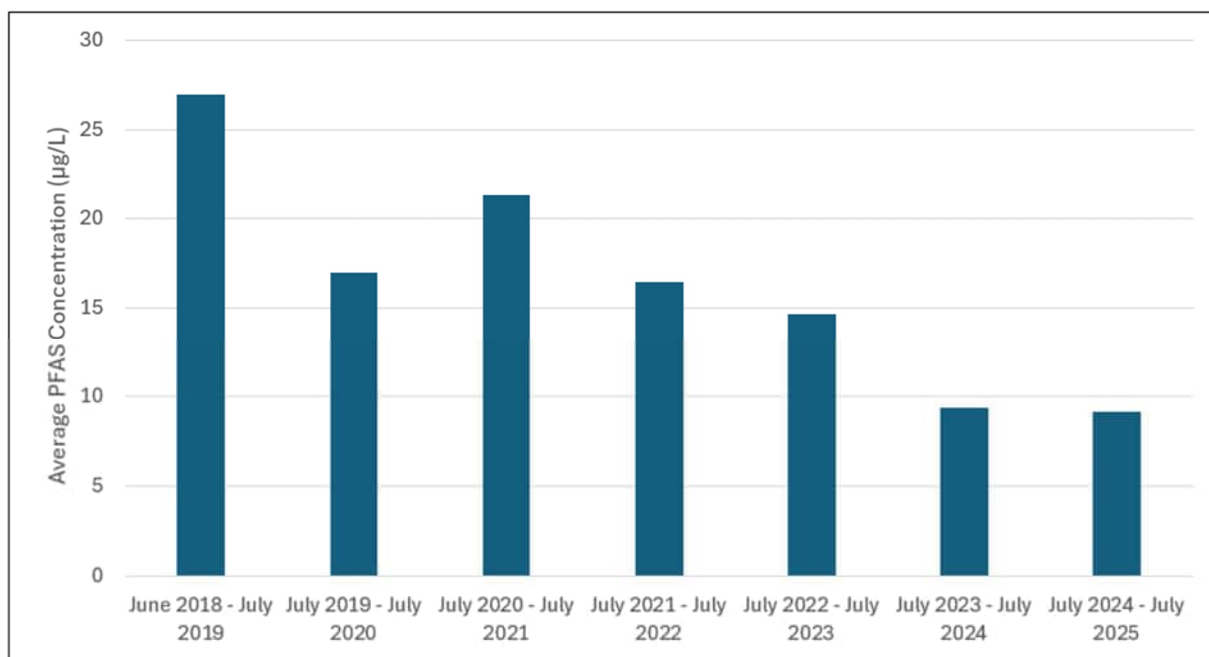


Figure 1 Annual average PFAS concentration treated by FFTA WTP

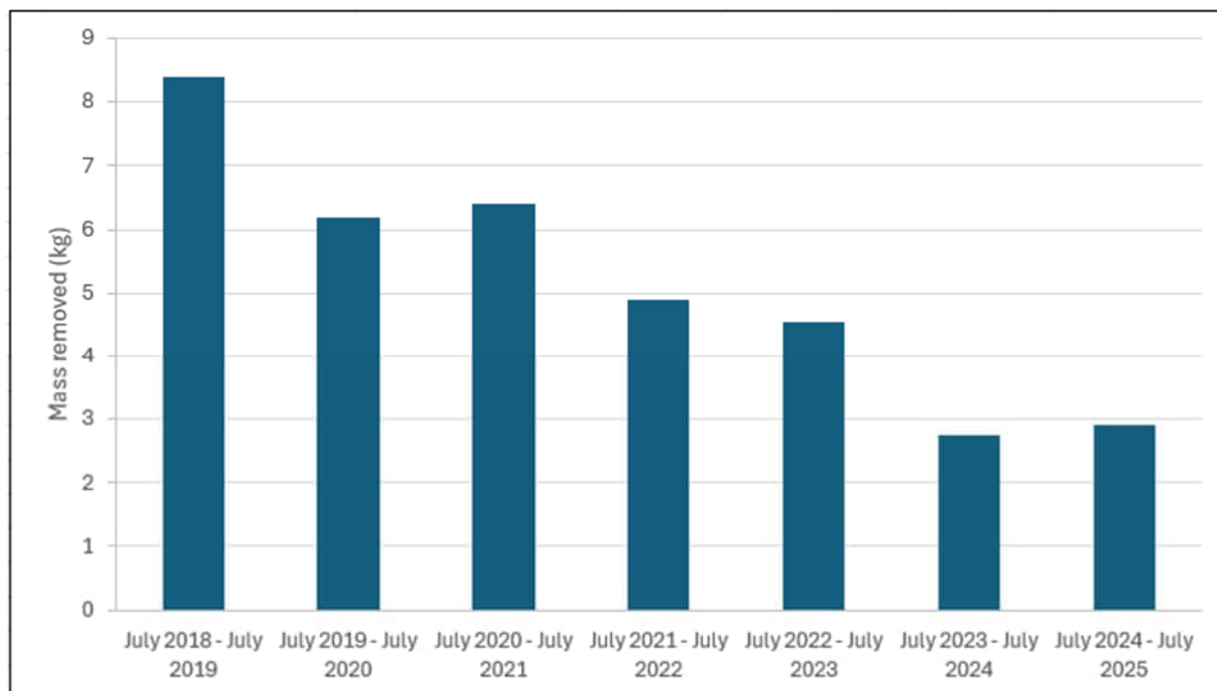


Figure 2 Annual PFAS mass removed by FFTA WTP

6.1.2 Southern Area (SA) WTP project

Defence continued the extraction of groundwater from the Southern Area (area immediately south of Lake Cochran, within the base) using ionic exchange resin treatment technology. Treated water is disposed via irrigation on the base. The WTP was offline from October 2025 to January 2026 for upgrade / re-commissioning.

The annual average PFAS concentration treated by the SA WTP is provided in **Figure 3** and the PFAS mass removed annually by the SA WTP is provided in **Figure 4**. PFAS concentrations are measured at the inlet of the water treatment plant.

The influent PFAS concentrations have decreased since WTP commencement in 2019, with about 30% decrease in 2024-2025 concentrations when compared to 2019-2020, as shown on **Figure 3**.

The annual PFAS mass removal has reduced from around 4.8 kg between 2019 and 2020 to about 2 kg between 2024 and 2025 as shown on **Figure 4**. Both concentrations and mass removal rates now appear to have plateaued. The decrease in PFAS concentrations and PFAS mass removal values are supported by groundwater modelling that indicated the majority of the central plume PFAS mass has migrated south beyond the extraction wellfield, which had occurred prior to the commencement of remedial works (in 2019).

Defence is currently designing and planning for an off-base groundwater extraction wellfield (and associated pipeline) between the southern base boundary and Cabbage Tree Road. The new extraction wellfield would allow treatment of off-base portions of the central plume and would result in the cessation of groundwater extraction from the current extraction wellfield located south of Lake Cochran.

Defence is also planning to trial an in-ground permeable reactive barrier to treat groundwater along the southern boundary of Lake Cochran, upgradient of the current extraction wellfield, to continue remediation of remaining PFAS mass in this area. The investigations, including the installation of groundwater monitoring wells and bench scale trial have commenced.

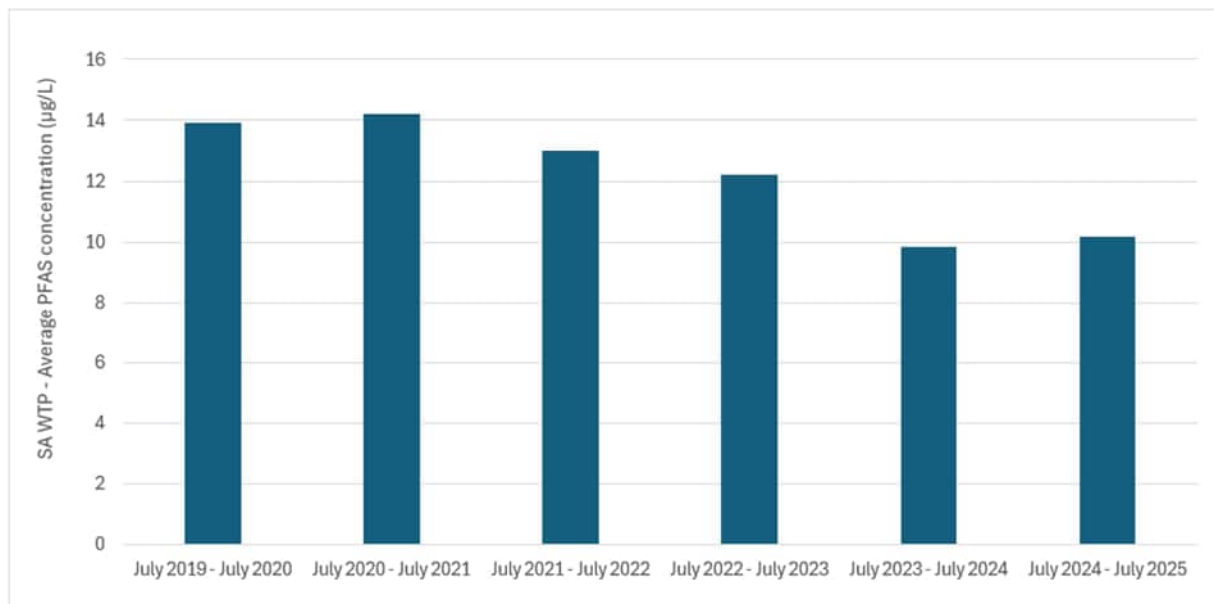


Figure 3 Annual average PFAS concentration treated by SA WTP

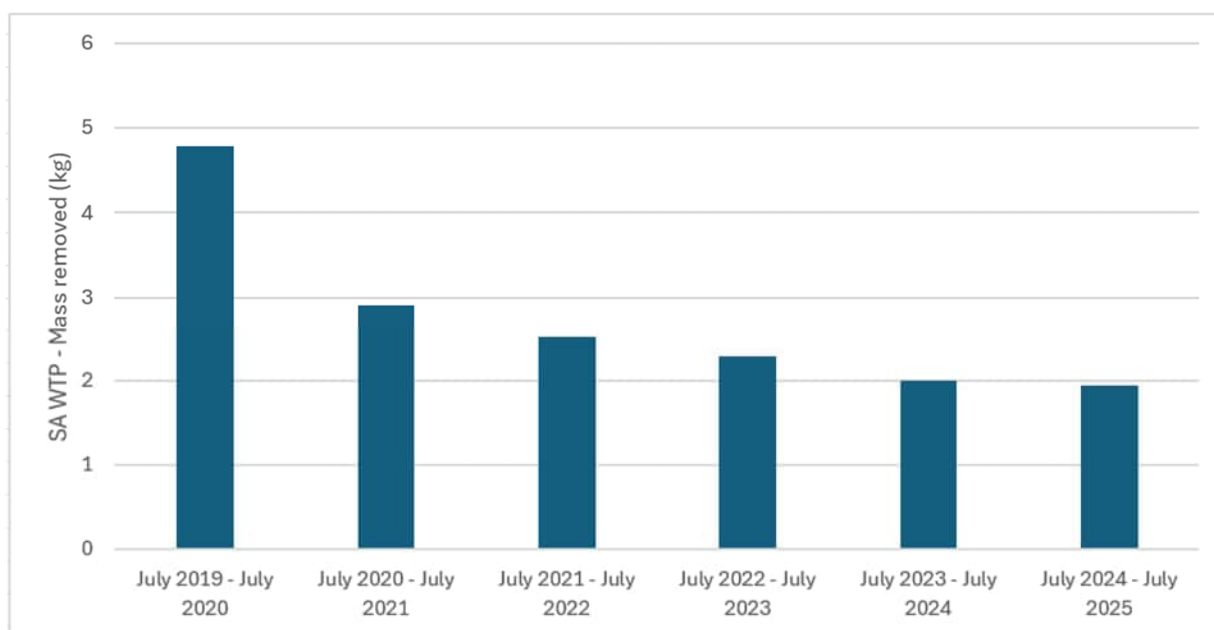


Figure 4 Annual PFAS mass removed by SA WTP

6.1.3 Moors Drain WTP project

Defence continued the treatment of PFAS-impacted stormwater discharging under Medowie Road to the northern branch of Moors Drain, via the Moors Drain WTP (MD WTP). The MD WTP extracts water from a stormwater pit which receives flow from stormwater pipes draining the northern areas of the base. Stormwater is treated using ionic exchange resin technology and treated water is discharged back to Moors Drain approximately 3 m downstream from the stormwater pit extraction point.

Defence is undertaking further characterisation of PFAS impacts and PFAS migration mechanisms in the Eastern Region catchment (i.e. on-base Moors Drain catchment) to optimise MD WTP performance and inform other PFAS management strategies (potentially targeting source areas). A summary of these investigations is outlined in **Section 6.2**.

The annual average PFAS concentration in influent received at MD WTP is shown on **Figure 5**. Given that the WTP influent is derived from stormwater influent, PFAS concentrations may potentially be diluted in the short term by significant rainfall events (refer to **Table 7**). However influent concentrations have decreased steadily from approximately 5.7 µg/L in 2017-2018 to approximately 2.16 µg/L in 2024-2025, independent of short-term rainfall impact.

The annual mass of PFAS removed by the WTP has varied over time, peaking between 2019 and 2021, when the treatment capacity was increased. The PFAS mass removed has reduced from around 0.7 kg between 2020 and 2021 to about 0.3 kg between 2024 and 2025, as shown on **Figure 6**.

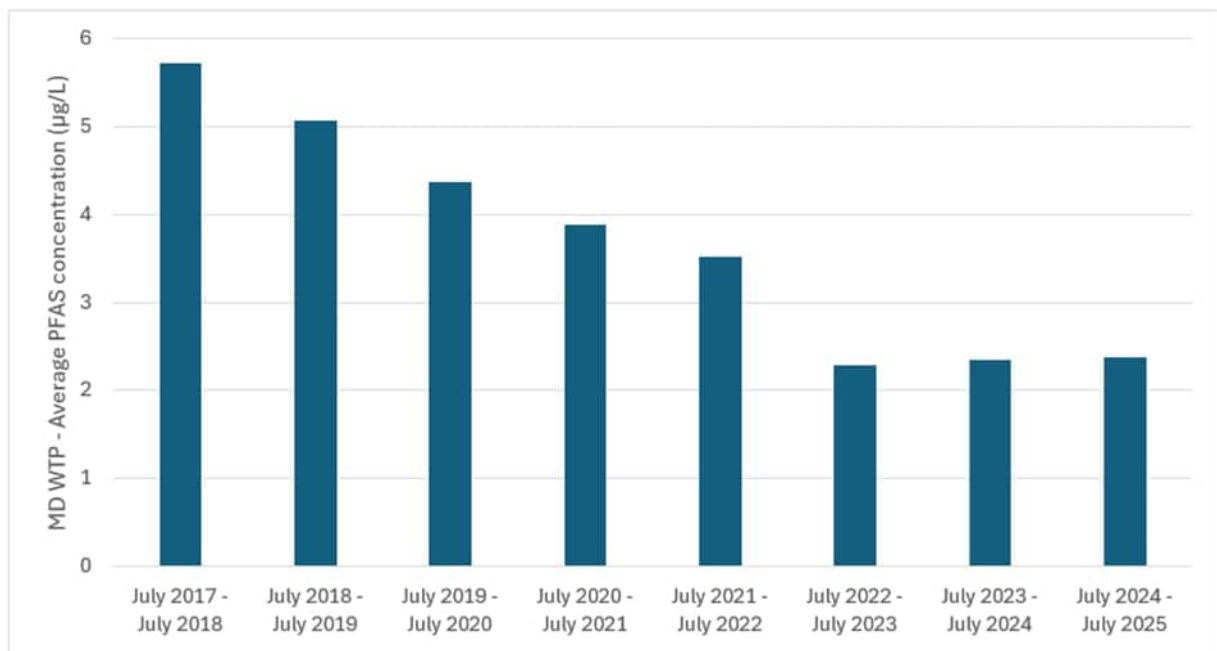


Figure 5 Annual average PFAS concentration treated by MD WTP

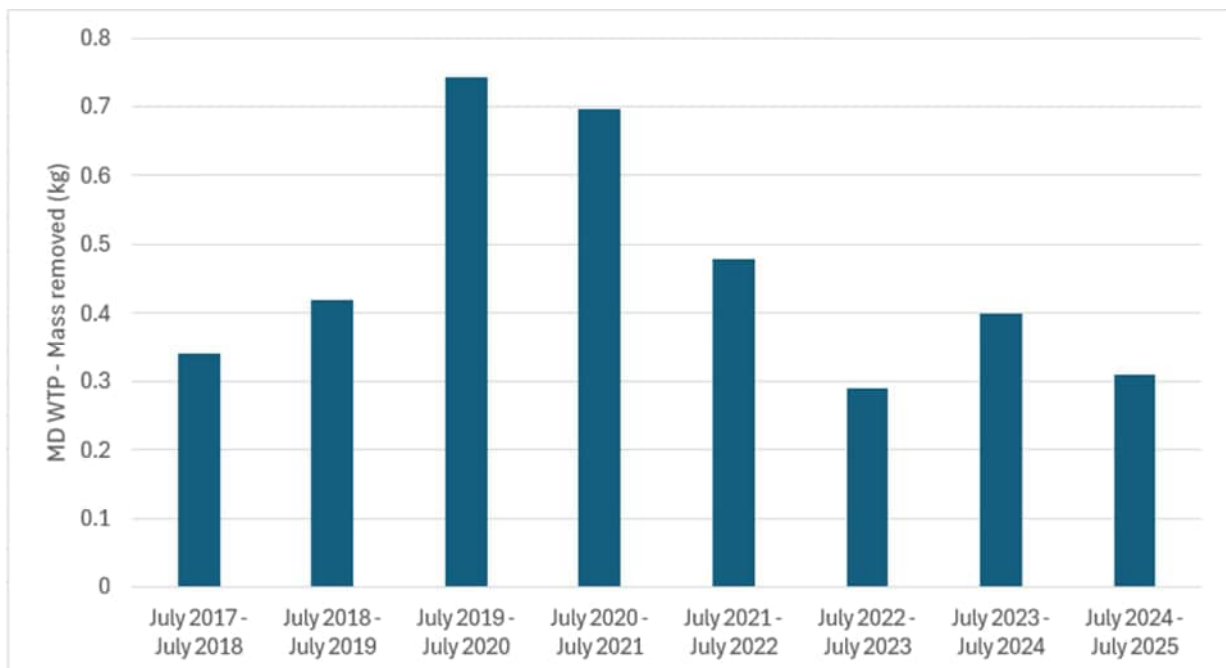


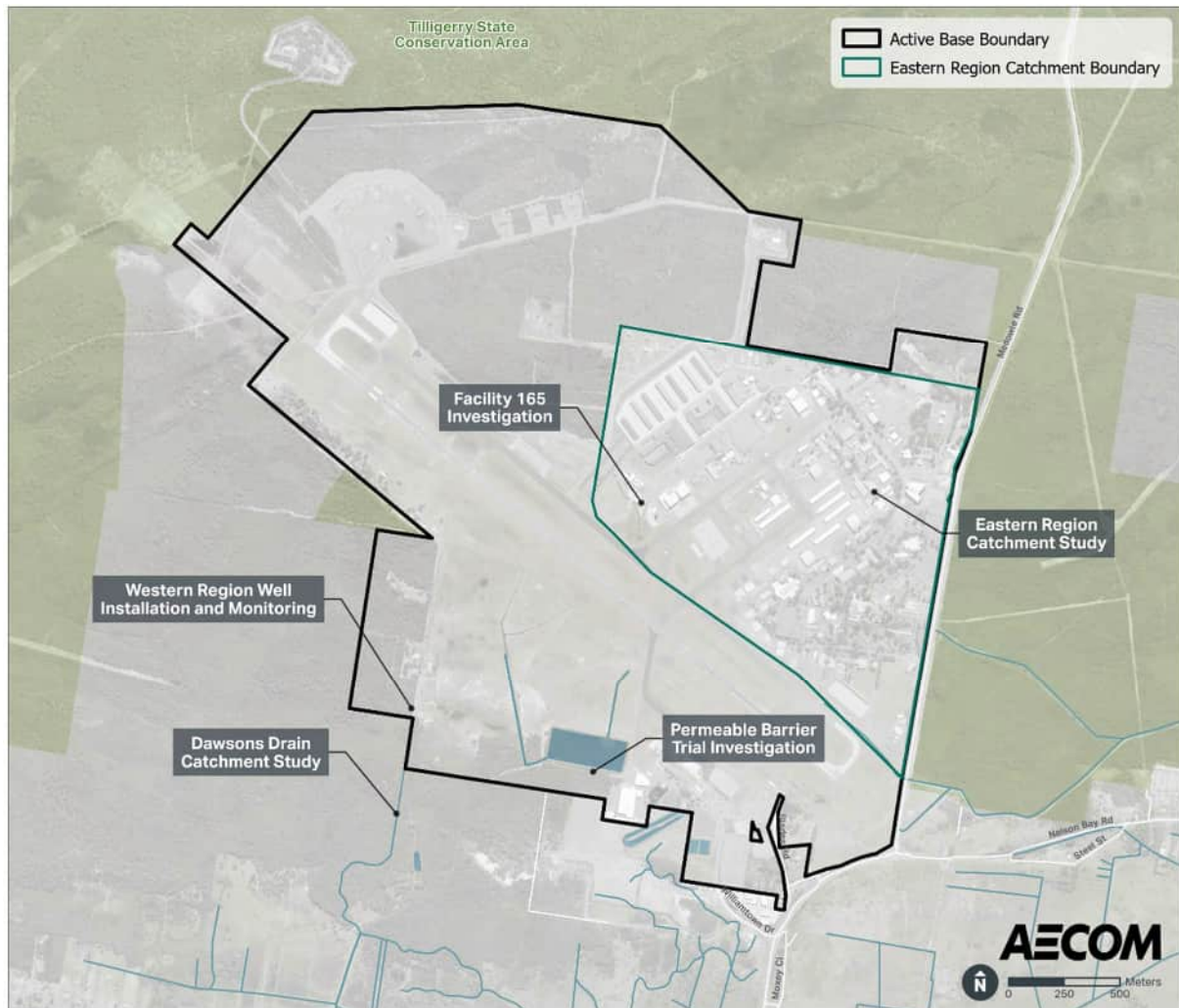
Figure 6 Annual PFAS mass removed by MD WTP

6.2 PFAS characterisation projects

Data from the following current PFAS characterisation projects have been included in the dataset referenced by this OMR. Where applicable, the data from these projects have been used to update the understanding of the CSM and evaluate changes in the characteristics of the PFAS plume.

The locations of the PFAS characterisation projects discussed in **Section 6.2.1** to **Section 6.2.5** are presented below on **Figure 7**.

Figure 7 PFAS Characterisation Project Locations



6.2.1 Dawsons Drain catchment study

During the 2025 monitoring period, AECOM commenced the Dawsons Drain catchment study comprising:

- Sampling of inflow and outflow locations at Lake Cochran daily for one week, then weekly for four weeks. The sampling took place in April and May 2026 and covered periods of moderate to high water levels within the lake
- Base flow sampling along Dawsons Drain when the flow rate and water table was very low (March 2025), and then again when the flow rate was moderate and the water table was high (May 2025).

While the investigation was ongoing at the time this report was prepared, the preliminary findings suggests that surface water from Lake Cochran is not a significant contributor to the overall mass of PFAS present within Dawsons Drain.

6.2.2 Western Region well installation and monitoring

In June 2025, AECOM installed and developed five new groundwater monitoring wells to the south of the new extraction wellfield in the Western Region to target the extent of the capture zone of the planned extraction system based on model outcomes. The monitoring program commenced at the time of the commissioning of the new Western Region wellfield in January 2026.

In addition to the above works, AECOM completed the monitoring of the FFTA wellfield between November 2025 and February 2026 to characterise changes in PFAS concentrations in groundwater following the switching off the existing FFTA groundwater extraction system and assess whether groundwater PFAS concentration rebound occurs.

At the time this OMR was prepared, this investigation was ongoing and is forecast to be completed in Q2 2026.

6.2.3 Eastern Region catchment study

AECOM completed three rainfall sampling events between June 2025 and August 2025, utilising seven autosamplers installed at targeted locations in the eastern catchment, including along the northern and southern tranches of Moors Drain. The purpose of these events was to collect PFAS mass discharge data to supplement the surface water baseline data collected by AECOM in 2024, to further refine the understanding of PFAS sources and transport mechanisms within the Eastern Region catchment.

The preliminary findings of this investigation suggest that the northern and eastern most sub-catchments within the Eastern Region were low priority for further investigations. This was due to distinctly lower PFAS mass discharge rates than other sub-catchments or being relatively small areas consisting primarily of car parks with no obvious potential sources. The surface water mass discharge rates were notably higher in Sub-catchment 2 (containing the MEOMS building), Sub-catchment 3 (containing the Former Fuel Farm) and Catchment F (which receives surface water discharge from Facility 165).

The findings from the study will inform future remedial planning in 2026.

6.2.4 Facility 165 investigation

AECOM completed a soil and groundwater investigation between November 2025 and December 2025, which comprised 41 shallow hand auger holes, 10 soil boreholes, 24 in-situ groundwater samples, 23 surface water samples and sampling 13 existing groundwater monitoring wells at, and in the vicinity of, the Facility 165 source area.

The purpose of the investigation was to characterise residual PFAS mass in soils at the Facility 165 source area, and to assess whether the residual PFAS impacts at this location are significant, ongoing contributors to PFAS migrating from the base in surface water into Dawsons Drain to the south, and Moors Drain to the east.

At the time this report was prepared, this investigation was ongoing and is forecast to be completed in Q2 2026. Once completed, the findings of the investigation will be used to inform future remediation options.

6.2.5 Permeable barrier trial investigation

The ROA (Geosyntec, 2022) noted that the ongoing PFAS discharge across the base boundary south of Lake Cochran is relatively small and groundwater crossing the boundary will eventually be captured in the Southern Area plume pump and treat system. Therefore, a passive carbon barrier system was identified as the preferred remedial option for this area.

In November 2025, AECOM commenced an investigation to determine site-specific isotherms and generate performance data to reduce uncertainties in the design of a permeable barrier system, . The works comprised the installation and sampling of 15 new groundwater monitoring wells along the southern bank of Lake Cochran, and the collection of bulk water and soil samples which were shipped to a specialist laboratory in the USA for a bench scale trial.

At the time this report was prepared, the investigations were ongoing.

6.2.6 Ad hoc sampling

AECOM completed ad hoc sampling (i.e. outside of the OMP) of properties within the Management Area during the monitoring period.

6.3 Infrastructure projects

6.3.1 National Airfield Works (P0008)

Infrastructure works associated with the National Airfield Works (project P0008) commenced in 2022 and continued through the monitoring period. These works involve the delivery of a major aircraft pavement, stormwater drainage and maintenance works. It is understood that the project requires soil management and dewatering as part of runway and stormwater drainage upgrade works.

A large material stockpile associated with the project was established adjacent the northern edge of Lake Cochran in 2022, with standard construction erosion and sediment controls in place. The stockpile is located adjacent to groundwater monitoring locations MW179S and MW179D, and surface water monitoring locations SW108 and SW110 within Lake Cochran. Note that PFAS concentrations in MW179S, MW179D, SW108 and SW110 were either within historical ranges or within an order of magnitude of historical ranges during the monitoring period (refer to Section 7.0 and Section 8.0), indicating that the potential for impact from the stockpiled material at these locations is low.

6.3.2 Greater Newcastle Aerotropolis

Land clearing and earthworks associated with the Greater Newcastle Aerotropolis development has continued beyond the southern base boundary south of Lake Cochran. These activities are however not expected to impact the results of the monitoring data or affect concentrations of PFAS in this part of the Management Area.

6.4 Significant weather events

During the monitoring period, the Hunter Region (as recorded at the BoM monitoring station located at RAAF Base Williamstown - Station ID 061078) experienced higher than average precipitation (1,722 mm, above the average of 998 mm). Rainfall was also significantly greater than the previous monitoring period (1,215 mm). The data for the monitoring period is presented in **Figure 8** against historical ranges on record since the weather station commenced operation in 1942.

Included in **Figure 8** is a 6-month Standardised Precipitation Index (SPI), which presents monthly rainfall against the average monthly rainfall as a value, where 1 is average rainfall, and where 2 is twice the average monthly rainfall. This allows for medium term assessment on the rainfall experienced by the area over the monitoring period.

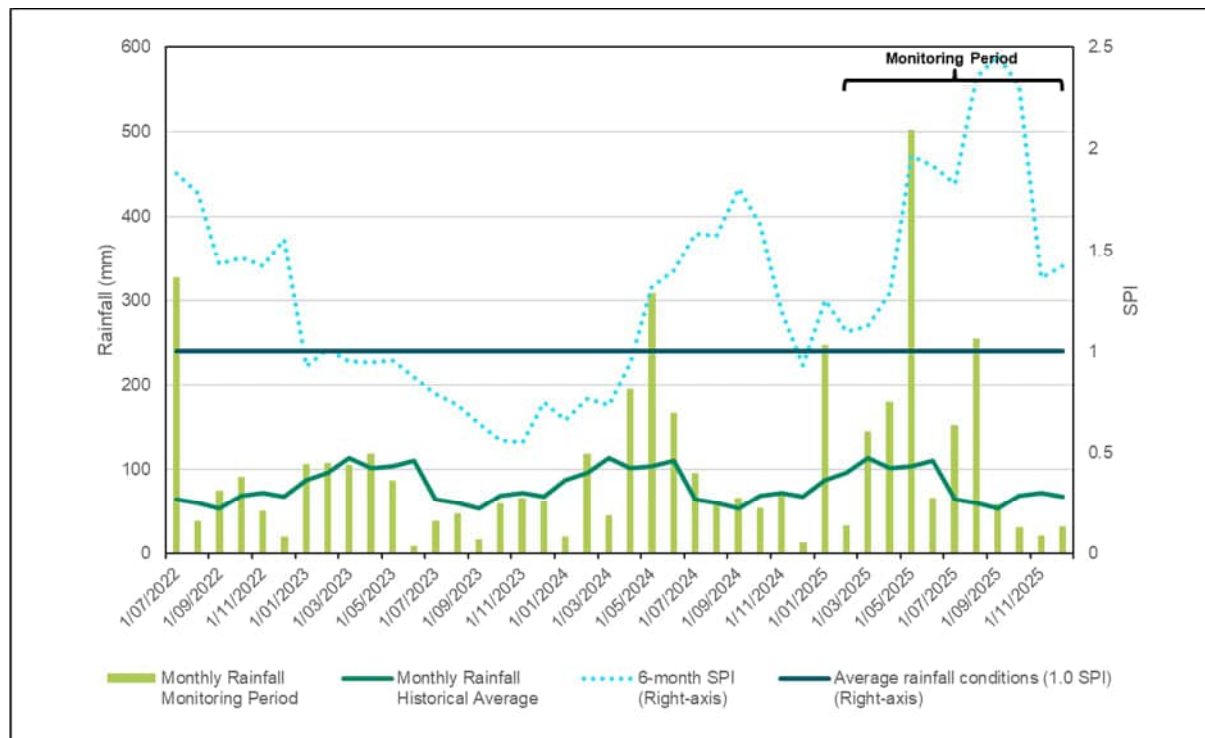


Figure 8 Rainfall data from January 2025 to December 2025. Rainfall data from Williamtown RAAF monitoring station (station 061078) (BoM, 2026)

The rainfall activity during the sampling events over the monitoring period for the BoM monitoring station (Station ID 061078) and the occurrence of wet weather event (days with rainfall >15 mm) are summarised in **Table 7** below.

Table 7 Rainfall during monitoring period

Sampling event and dates	Recorded rainfall (mm) (BoM, 2025) for month	Wet weather events immediately prior or during the sampling period (days with rainfall >15 mm)
April 2025 Annual Sampling Event 31 March to 17 April 2025 (main event)	180 mm (April 2025, total)	29 March 2025 (37 mm) 30 March 2025 (34.2 mm)
October 2025 Biannual Sampling Event 7 October to 20 October 2025	30.8 mm (October 2025, total)	Nil

From the review it is noted that the area typically experienced above average rainfall in the first half of the monitoring period (i.e. late summer, autumn and winter) with one month in this period (May 2025) experiencing greater than four times the historical average rainfall.

Average groundwater elevations in shallow groundwater monitoring wells (1.48 m AHD) were on average 0.12 m higher than those reported during the 2024 monitoring period (1.36 m AHD), and on average 0.6 m higher than those reported during the 2023 monitoring period (0.88 m AHD). This indicates that the above average precipitation reported in the first half of the monitoring period resulted in increased groundwater recharge and higher groundwater elevations in the shallow groundwater zone during the 2025 monitoring period.

The higher-than-average rainfall experienced between January 2025 and September 2025 has the potential to impact upon the interpretation of the data, as follows:

- The increased volume of surface waters being present in the broader catchment has the potential to increase the distribution of PFAS compounds within the surface water bodies. PFAS concentrations may become diluted, report lower than historical concentrations and result in PFAS being detected at greater distances from the source.
- Potential to disperse PFAS to shallow soils via increased surface run off from source areas.
- Potential for increased mixing between shallow groundwater and surface water.
- Increase in groundwater elevation may result in longer contact with impacted soils.

However, it is acknowledged that the Management Area has been subject to multiple significant flood events historically, and PFAS concentrations in stormwater discharges from the base would have been higher when PFAS containing AFFF was regularly being used. As a result, it is unlikely that these flood events have significantly changed the lateral extent of PFAS impacts within the Management Area.

Recorded rainfall between September 2025 and December 2025 was generally below historical averages albeit with minor fluctuations above and below long-term monthly averages.

6.5 Off base activities

Whilst ongoing development associated with the Newcastle Airport precinct to the south of the base continued during the monitoring period, there were no changes in residential land use or water usage observed during field activities and /or reported in the off-base monitoring areas during the monitoring period.

7.0 Monitoring data summary

7.1 Overall summary

7.1.1 OMP data

As part of the OMP, the following two scheduled monitoring events were completed by AECOM over the monitoring period:

- Annual surface water, sediment and groundwater sampling undertaken in April 2025 (1 to 17 April 2025, with additional sampling undertaken on 26 to 27 May 2025 and on 10 June 2025) (AECOM, 2025c).
- Biannual surface water, sediment and groundwater sampling undertaken in October 2025 (7 to 20 October 2025) (AECOM, 2025e).

The sample locations, the management zones and surface water features are shown in **Appendix A**, on **Figures F2-1 to F2-4** for groundwater locations, **Figure F3** for surface water locations and **Figure F4** for sediment locations. **Figure F3** also includes key surface water pathways from the base.

Results from the monitoring period are summarised in the following sections for each matrix. The monitoring activities are summarised in the OMP Sampling Event Reports (AECOM, 2025c and AECOM, 2025e) provided in **Appendix H**. It is noted that the data has been presented and discussed in line with the updated OMP (Defence, 2026).

The locations and relevant data are discussed in general with reference to sources areas, management zones and/or other areas of interest, as shown in **Table 8** below.

Table 8 Location groupings

Management zone	Area	Locations
Groundwater		
On-base	Former & Current Fire Station (Facility 165)	MW196, MW198, MW200, MW201D, MW201S, MW202D, MW202S
	Former DEMS Landfill (Facility 394)	MW171D, MW171S, MW172, MW240D, MW281S, MW282S, MW329, MW340D, MW340S, MW342D, MW344D, MW344S, MW354S
	Former Fire Training Area (Facility 479)	MW166, MW167, MW168, MW169D, MW169S
	HWC Pump Station 7 (PS7)	MW134D, MW134I, MW245D, MW245S, MW317D, MW317S
	Lake Cochran	MW108D, MW108S, MW109D, MW175D, MW179D, MW179S, MW466, MW468
	North East Landfill	MW406
	Northern Boundary	MW155
	Trade Waste Treatment (Facility 480)	MW106D, MW106S, MW208, MW210D, MW210S, MW304, MW441, MW886

Management zone	Area	Locations
Primary Management Zone	Cabbage Tree Road	MW126D, MW126S, MW178, MW238D*, MW238S*
	Southern Area	MW104D*, MW104S*, MW177, MW184D*, MW184S*, MW185S*, MW188D, MW188S, MW220S, MW731D, MW731S
	Southern Area - Cabbage Tree Road	MW271D, MW271S, MW278D, MW278S
Secondary Management Zone	Cabbage Tree Road	MW125D, MW125S, MW230S
	East of base - HWC Pump Station 9 (PS9)	MW130D, MW130S, MW132D, MW132I, MW160, MW318D, MW318S, MW829, MW897D, MW897S
	East of base – Moors Drain	MW121, MW161D, MW161S, MW247D, MW247S, POT046
	East of base – Nelson Bay Road	MW122, MW162D, MW162S
	Fullerton Cove	MW144, MW147D, MW147S, MW536, MW537
	Lavis Lane	MW195, MW279S
	Salt Ash	MW123, MW255D, MW255S, MW256D, MW256S, MW257D, MW257S, MW260D, MW260S
	South of base – Nelson Bay Road	MW150D, MW150S
	Southern Area - Cabbage Tree Road	MW146AD, MW146S
	West of base	MW107D, MW107S, MW315D, MW315S
Broader Management Zone	Cabbage Tree Road	MW124**, MW139, POT085*, POT107
	East of base - HWC Pump Station 9 (PS9)	MW159D, MW159S, MW842, MW844
	Fullerton Cove	MW142D, MW142S, MW231D, MW231S, MW232D, MW232S, MW266D*, MW266S, MW268D**, MW268S**, MW270D, MW270S, MW538, POT236*, POT303, POT365, POT382
	Lavis Lane	MW128D, MW128S, MW163, MW316D
	Salt Ash	MW118, MW165*, MW252S*, POT144
	West of base	MW280S
Outside BMZ	Cabbage Tree Road	MW137
	North of base – Background	MW264D, MW264S
	Salt Ash	MW262D, MW262S
	West of base	MW241D, MW241S

Management zone	Area	Locations
Surface Water		
On-base	Dawsons Drain (Lake Cochran)	SW055
	Lake Cochran	SW108, SW110
	Moors Drain Catchment	SW582, SW588
	On-base Drain (East of Former DEMS Landfill)	SW048
	On-base Drain (North of Lake Cochran)	SW047
Primary Management Zone	Dawsons Drain	SW060, SW333
Secondary Management Zone	Dawsons Drain	SW059
	Fourteen Foot Drain	SW600
	Moors Drain	SW001, SW006, SW007, SW009, SW011
	Tilligerry Creek	SW019, SW023
Broader Management Zone	Fourteen Foot Drain	SW062
	Fullerton Cove Ring Drain	SW259
	Moors Drain	SW005, SW014
	Ten Foot Drain	SW081
	Tilligerry Creek	SW024, SW079
Sediment		
On-base	Dawsons Drain (Lake Cochran)	SD055
	Lake Cochran	SD108, SD110
	On-base Drain (East of Former DEMS Landfill)	SD048
	On-base Drain (North of Lake Cochran)	SD047
Primary Management Zone	Dawsons Drain	SD060, SD333
Secondary Management Zone	Dawsons Drain	SD059
	Fourteen Foot Drain	SD600
	Moors Drain	SD001, SD006, SD007, SD009, SD011
	Tilligerry Creek	SD019, SD023
Broader Management Zone	Fourteen Foot Drain	SD062
	Fullerton Cove Ring Drain	SD259
	Moors Drain	SD005, SD014
	Ten Foot Drain	SD081
	Tilligerry Creek	SD024, SD079
Outside Broader Management Zone	Fullerton Cove (tidal gate outlet)	SD254, SD255, SD326

Notes:

* Groundwater monitoring location unable to be sampled during the scheduled event/s in the monitoring period.

** Gauge-only groundwater monitoring location.

7.1.2 Use of historical data

In addition to the OMP data, AECOM has also considered the historical data for on-base and off-base areas that are available in the Defence database. Historical data have been included in the analytical result tables and Mann-Kendall analysis table, **Table T5 to Table T8** (in **Appendix B**), as well as in temporal trend graphs for select PFAS compounds presented in **Appendix C**.

The Mann-Kendall analysis was used to assess the trends in the concentrations in groundwater only, and whether they have a monotonic upward or downward trend. Mann-Kendall analysis was not used to assess the trends in PFAS concentrations in surface waters or sediments, given that variables such as rainfall, which influence PFAS concentrations are not factored into the analysis.

Temporal trend graphs for PFOS, PFHxS, PFOA and PFBS were prepared for groundwater results, while temporal trend graphs for PFOS+PFHxS and PFOA were prepared for surface water and sediment results, all against the 30-day average daily rainfall total (in mm) to allow for assessment of the influence of rainfall on PFAS concentrations. The temporal trend graphs identify the monitoring period as well as new maximum concentrations within the monitoring period. Where concentrations were below the LOR, these were presented on the graphs as half the LOR value.

7.2 Groundwater results

7.2.1 Groundwater field observations

Groundwater monitoring well condition and field observations at the locations visited are provided in **Table T1** and **Table T2** in **Appendix B** and key observations are summarised below:

April 2025

- MW104D, MW104S, MW184D, and MW184S: located at Newcastle Airport, were destroyed by construction works.
- MW106D, MW108D, MW108S, MW172, MW179D, MW264S: were found to be blocked close to the base of the wells; however, groundwater was able to be sampled from within the screen interval at these locations, and the samples collected were considered representative of groundwater conditions.
- MW109D: the well gatic was full of water above the top of casing, which was removed prior to sampling. Given the J-cap was secure, water ingress into the well was unlikely, and the sample collected was considered representative of groundwater conditions.
- MW165: the well could not be located due to overgrown grass.
- MW252S: flood waters were covering the monitoring well and therefore was not sampled. Note that the location was visited on separate occasions during the sampling event; however, the flood water had not subsided.
- MW266D: the gatic bolts were rusted and the well could not be opened.
- No visible signs of contamination were observed in the groundwater at the locations sampled.
- Organic and sulphurous odours were noted in groundwater at 51 locations.

October 2025

- MW107D, MW107S, MW130D, MW130S, MW252S, MW280S, MW315D, MW315S: flood waters were covering the monitoring wells and therefore were not sampled. Note that the locations were visited on separate occasions during the sampling event; however, the flood water had not subsided.
- MW165: the well could not be located due to overgrown grass.
- MW177, MW264S: the wells were partially blocked due to roots; however, groundwater was able to be sampled from within the screen interval at these locations, and the samples collected were considered representative of groundwater conditions.
- MW266D: the gatic bolts were rusted and the well could not be opened.
- No visible signs of contamination were observed in the groundwater at the locations sampled.
- Organic and/or sulphurous odours were noted in groundwater at 38 locations.

7.2.2 Groundwater elevations

The standing water level (SWL) was measured in each monitoring well prior to sampling, and in select monitoring wells during a targeted gauging round conducted during each monitoring event, to evaluate groundwater elevations (GWE). The SWL and GWE from the monitoring period are presented in **Table T1** in **Appendix B** and are summarised below in **Table 9** for shallow/intermediate and deep aquifers.

Table 9 Summary of groundwater elevations

Gauging Event	No. Wells	Min. SWL (mbTOC)	Max. SWL (mbTOC)	Min. GWE (mAHD)	Max. GWE (mAHD)
Shallow/Intermediate aquifer					
April 2025	90	0.000 (multiple)	3.65 (MW304)	-0.038 (MW128S)	8.652 (MW264S)
October 2025	58	0.139 (MW264S)	4.846 (MW177)	-0.710 (MW829)	9.353 (MW264S)
Deep aquifer					
April 2025	55	0.000 (multiple)	2.775 (MW210D)	0.300 (MW316D)	8.663 (MW264D)
October 2025	36	0.045 (MW264D)	1.895 (MW162D)	0.326 (MW231D)	9.302 (MW264D)

Note: mAHD = metres relative to Australian Height datum, mbTOC = metres below Top of Casing.

Min = Minimum, Max = Maximum

GWEs for both shallow and deep groundwater aquifers were similar between the April 2025 and October 2025 monitoring events, with fluctuations generally less than 0.5 meters (but up to 0.7 meters reported at some locations). These variations are likely associated with elevated rainfall and episodic flooding observed during the monitoring period. Overall, GWEs remained within the historical ranges established between 2019 and 2024.

Historically a strong correlation between rainfall and groundwater level fluctuation at the base has been observed. Typically, large rainfall events result in a rapid rise in groundwater levels, followed by a relatively slow decline. This pattern was confirmed during the monitoring event as most wells recorded their highest groundwater elevation during the April 2025 to June 2025 period (annual event), with levels recorded in October 2025 generally slightly lower or unchanged compared to annual event. Note that some locations remained inaccessible due to lingering flood waters.

7.2.3 Groundwater flow directions

The SWLs measured in groundwater monitoring wells during each event were converted to groundwater elevations (in mAHD). Depth to groundwater measurements is presented in **Table T1** in **Appendix B**. The inferred potentiometric contours are presented in **Appendix A**, in **Figure F5** (shallow aquifer interval) and **Figure F6** (deep aquifer interval) for the April 2025 sampling event, and in **Figure F7** (shallow aquifer interval) and **Figure F8** (deep aquifer interval) for the October 2025 sampling event.

Groundwater flow directions in the Tomago Sand Beds aquifer within the monitored area remained consistent with historical trends, with flow inferred to the south towards Fullerton Cove in the western portion of base, and southeast towards Tilligerry Creek in the eastern portion of the base. Groundwater flow in the Stockton Sand Beds aquifer, located between Tilligerry Creek and the Newcastle Bight, was inferred to be in a northerly direction, towards Tilligerry Creek.

The flow directions were consistent across both the shallow and deep groundwater profiles with those measured throughout the previous monitoring periods.

7.2.4 Groundwater quality parameters

Groundwater quality parameters were measured during the collection of groundwater samples. The stabilised readings of groundwater quality parameters from the monitoring period are presented in **Table T2** in **Appendix B**, and summarised below in **Table 10**.

The readings (refer to **Table 10**) indicate groundwater conditions during the monitoring period to be:

- poor to well oxygenated
- fresh to saline
- acidic to mildly alkaline
- reducing to mildly oxidising conditions.

Overall, the water quality parameters reported during the monitoring period were within historical data ranges for the monitoring bores concerned.

Table 10 Summary of groundwater quality parameters

Sampling Event	Dissolved Oxygen (mg/L)		Temperature (°C)		Electrical Conductivity (µS/cm)		pH (pH units)		Oxidation-Reduction Potential, corrected (mV)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
On-base										
April 2025	0.93 (MW179D)	5.01 (MW342D)	18.6 (MW340D)	24.6 (MW886)	51.4 (MW200)	269.6 (MW210S)	4.11 (MW245S)	6.68 (MW109D)	46.3 (MW171D)	437.5 (MW167)
October 2025	0.77 (MW340S)	4.04 (MW168)	13.2 (MW329)	17.9 (MW106D)	55.1 (MW166)	238.9 (MW344D)	4.18 (MW282S)	6.88 (MW344D)	61.4 (MW109D)	394.8 (MW240D)
Primary Management Zone										
April 2025	1.28 (MW188D)	6.04 (MW126S)	19.3 (MW271D)	22.0 (MW188S)	166.8 (MW188D)	686.0 (MW188S)	5.42 (MW271S)	6.93 (MW188S)	97.3 (MW278D)	238.9 (MW271D)
October 2025	0.66 (MW278S)	2.61 (MW177)	14.4 (MW271D)	19.8 (MW220S)	61.6 (MW178)	3,547 (MW731D)	5.28 (MW271S)	6.55 (MW271D)	16.9 (MW278S)	232.9 (MW126D)
Secondary Management Zone										
April 2025	1.56 (MW262S)	6.91 (MW125D)	17.6 (MW144)	24.9 (MW255S)	40.6 (MW257D)	30,405 (MW147D)	4.17 (MW132I)	7.01 (MW897D)	39.5 (MW161S)	438.4 (MW829)
October 2025	0.16 (MW144)	3.24 (MW829)	14.0 (MW536)	18.7 (multiple)	61.5 (MW247D)	23,264 (MW536)	4.34 (MW247D)	8.18 (MW144)	-76.3 (MW144)	337.1 (MW829)
Broader Management Zone										
April 2025	1.71 (POT303)	8.13 (MW231D)	17.5 (MW538)	26.9 (POT144)	89.9 (MW844)	41,842 (MW266S)	4.84 (MW280S)	7.82 (MW128D)	-1.7 (MW231D)	415.1 (POT365)
October 2025	0.35 (MW231D)	2.69 (POT365)	15.1 (MW142D)	25.1 (POT382)	97.0 (MW270D)	42,300 (MW266S)	4.88 (MW139)	7.68 (MW128D)	25.9 (MW231D)	315.6 (POT365)
Outside Broader Management Zone										
April 2025	0.69 (MW262S)	3.44 (MW241S)	17.0 (MW262D)	22.0 (MW241S)	77.7 (MW241S)	39,447 (MW262D)	4.58 (MW137)	6.84 (MW262S)	57.2 (MW262S)	197.1 (MW264D)
October 2025	1.14 (MW264D)	1.99 (MW241S)	14.5 (MW264S)	20.0 (multiple)	82.4 (MW241S)	3,586 (MW262S)	4.31 (MW264S)	6.14 (MW264D)	90.0 (MW264S)	154.3 (MW137)

7.2.5 Groundwater analytical results

Groundwater analytical results from the monitoring period as well as available historical groundwater analytical results for OMP sampling locations (including data from other projects) are presented in **Table T5** in **Appendix B**. Mann-Kendall Analysis for the same dataset is presented in **Table T8** in **Appendix B**. A summary of groundwater analytical results for each event during the monitoring period is provided in **Table 11** for all OMP locations. A summary of Mann-Kendall trends for groundwater sampling location is presented in **Table 12**, grouped by source areas and areas of interest (noting that only decreasing or increasing trends are displayed, excluding where there were no trends).

Deviations from the historical groundwater data are presented on **Figure F17** in **Appendix A**.

Groundwater results for PFOS, PFHxS, PFOA and PFBS across the monitoring period (the highest concentrations at each location) are presented spatially on **Figure F9** to **Figure F12** in **Appendix A**. Additionally, OMP and other historical groundwater concentrations of PFOS, PFHxS, PFOA and PFBS have been displayed graphically on temporal trend graphs in **Appendix C**, grouped by source areas and areas of interest. A review of the temporal trend graphs indicated that for the majority of groundwater monitoring locations on-base and across the Williamstown Management Area, no clear trends were visible. A high degree of seasonal variability, including potential response to rainfall, is observed across the majority of locations. The clearest potential trends were observed for monitoring wells in the Western Region (refer to **Graph G29** to **Graph G40**, in **Appendix C**), where concentrations continue to decrease for PFOS, PFHxS, PFOA and PFBS in selected monitoring wells.

The interpretive assessment of the groundwater analytical results is discussed in detail in **Section 8.0**.

Overall, the data presented suggests that while there are some localised areas of increasing or decreasing concentrations, there has been no significant changes in PFAS concentrations in groundwater at the base and across the Williamstown Management Area during the monitoring period.

Table 11 Summary of PFOA, PFOS, PFHxS, PFOS+PFHxS and PFBS concentrations in groundwater

Sampling Event	No. of Samples ¹	Compound	Concentration Range [in µg/L] in Sampling Event (Location/s)	No. of Samples ¹ with Concentration > LOR	No. of Samples ¹ with Exceedances of Human Health Criteria	No. of Samples ¹ with Exceedances of Ecological Criteria
On-base						
April 2025	49 Primary 12 QC	PFOA	<LOR (multiple) to 1.92 (MW354S)	34	0	0
		PFOS	<LOR (multiple) to 107 (MW441)	51	NA	44
		PFHxS	<LOR (multiple) to 19.7 (MW441)	54	NA	NA
		PFOS+PFHxS	<LOR (multiple) to 127 (MW441)	57	23	NA
		PFBS	<LOR (multiple) to 0.29 (multiple)	33	NA	NA
October 2025	24 Primary 5 QC	PFOA	<LOR (multiple) to 0.87 (MW354S)	22	0	0
		PFOS	0.004 (MW240D) to 30.2 (MW329)	29	NA	22
		PFHxS	<LOR (MW169D) to 5.94 (MW329)	28	NA	NA
		PFOS+PFHxS	0.02 (MW169D) to 36.1 (MW329)	29	13	NA
		PFBS	<LOR (multiple) to 0.16 (MW466)	18	NA	NA
Primary Management Zone						
April 2025	11 Primary	PFOA	<LOR (multiple) to 0.56 (MW731D)	5	2	0
		PFOS	0.002 (MW278D) to 18.8 (MW731D)	11	8	7
		PFHxS	<LOR (multiple) to 6.27 (MW731D)	9	6	NA
		PFOS+PFHxS	0.002 (MW278D) to 25.1 (MW731D)	11	4	NA
		PFBS	<LOR (multiple) to 0.86 (MW731D)	6	0	NA
October 2025	11 Primary 2 QC	PFOA	<LOR (multiple) to 0.44 (MW126S)	4	3	0
		PFOS	0.004 (MW126D) to 12.6 (MW126S)	13	8	6
		PFHxS	<LOR (multiple) to 7.96 (MW126S)	11	5	NA

Sampling Event	No. of Samples ¹	Compound	Concentration Range [in µg/L] in Sampling Event (Location/s)	No. of Samples ¹ with Concentration > LOR	No. of Samples ¹ with Exceedances of Human Health Criteria	No. of Samples ¹ with Exceedances of Ecological Criteria
		PFOS+PFHxS	0.007 (multiple) to 20.6 (MW126S)	13	4	NA
		PFBS	<LOR (multiple) to 0.64 (MW126S)	6	0	NA
Secondary Management Zone						
April 2025	46 Primary 12 QC	PFOA	<LOR (multiple) to 0.093 (MW150D)	13	0	0
		PFOS	<LOR (multiple) to 2.01 (MW161S)	42	31	26
		PFHxS	<LOR (multiple) to 1.37 (MW150D)	45	17	NA
		PFOS+PFHxS	<LOR (multiple) to 2.56 (MW161S)	50	1	NA
		PFBS	<LOR (multiple) to 0.122 (MW150D)	13	0	NA
October 2025	15 Primary 6 QC	PFOA	<LOR (multiple) to 0.01 (MW132D)	2	0	0
		PFOS	<LOR (multiple) to 0.35 (multiple)	14	10	7
		PFHxS	<LOR (multiple) to 0.74 (MW279S)	15	8	NA
		PFOS+PFHxS	<LOR (multiple) to 1.09 (MW279S)	18	0	NA
		PFBS	<LOR (multiple) to 0.06 (MW279S)	3	0	NA
Broader Management Zone						
April 2025	26 Primary 3 QC	PFOA	<LOR (multiple) to 0.011 (MW538)	2	0	0
		PFOS	<LOR (multiple) to 0.235 (MW538)	16	5	4
		PFHxS	<LOR (multiple) to 0.195 (MW538)	13	2	NA
		PFOS+PFHxS	<LOR (multiple) to 0.43 (MW538)	21	0	NA
		PFBS	<LOR (multiple) to 0.052 (MW538)	2	0	NA
October 2025	15 Primary	PFOA	<LOR (multiple) to 0.014 (MW538)	2	0	0
		PFOS	<LOR (multiple) to 0.29 (MW538)	6	2	2

Sampling Event	No. of Samples ¹	Compound	Concentration Range [in µg/L] in Sampling Event (Location/s)	No. of Samples ¹ with Concentration > LOR	No. of Samples ¹ with Exceedances of Human Health Criteria	No. of Samples ¹ with Exceedances of Ecological Criteria
		PFHxS	<LOR (multiple) to 0.258 (MW538)	4	1	NA
		PFOS+PFHxS	<LOR (multiple) to 0.548 (MW538)	6	0	NA
		PFBS	<LOR (multiple) to 0.047 (MW538)	2	0	NA
Outside Broader Management Zone						
April 2025	7 Primary, 4 QC	PFOA	<LOR (multiple)	0	0	0
		PFOS	<LOR (multiple) to 0.033 (MW262S)	8	2	1
		PFHxS	<LOR (multiple) to 0.016 (MW262S)	3	0	NA
		PFOS+PFHxS	<LOR (multiple) to 0.049 (MW262S)	8	0	NA
		PFBS	<LOR (multiple)	0	0	NA
October 2025	6 Primary, 2 QC	PFOA	<LOR (multiple)	0	0	0
		PFOS	<LOR (multiple) to 0.004 (multiple)	4	0	0
		PFHxS	<LOR (multiple) to 0.013 (MW241S)	5	0	NA
		PFOS+PFHxS	<LOR (multiple) to 0.013 (multiple)	6	0	NA
		PFBS	<LOR (multiple) to 0.002 (MW241S)	1	0	NA

Notes:¹ = Sample counts include intra-laboratory and inter-laboratory duplicates

multiple = the value applies to multiple locations

NA = Not applicable – where there are no applicable Human Health screening criteria for PFOS, PFHxS and PFBS (when screening on-base locations for recreation use criteria only), and no applicable Ecological screening criteria for the PFHxS, PFOS+PFHxS and PFBS.

Human health criteria relate to recreational criteria for locations on the base and both drinking water and recreational criteria for all off-base locations.

QC = Quality Control (sample)

Table 12 Summary of Mann-Kendall Trend Analysis

Area	On-base / Management Zone	Number of Locations in Area	Analyte	Trend Summary		
				Decreasing Trend	Increasing Trend	New Maximum
Former & Current Fire Station (Facility 165)	On-base	7	PFOA	1 Location (MW196)	-	-
			PFOS	-	1 Location (MW202D)	1 Location (MW196)
			PFHxS	1 Location (MW196)	-	-
			PFOS+ PFHxS	1 Location (MW196)	1 Location (MW202D)	-
			PFBS	2 Locations (MW196, MW202S)	-	-
Former DEMS Landfill (Facility 394)	On-base	13	PFOA	5 Locations (MW171S, MW281S, MW329, MW340S, MW344S)	2 Locations (MW172, MW344D)	1 Location (MW344D)
			PFOS	7 Locations (MW171D, MW171S, MW281S, MW329, MW340D, MW342D, MW344D)	1 Location (MW172)	-
			PFHxS	8 Locations (MW171S, MW240D, MW281S, MW282S, MW329, MW340S, MW344S, MW354S)	2 Locations (MW172, MW342D)	3 Locations (MW340D, MW342D, MW344D)
			PFOS+ PFHxS	8 Locations (MW171D, MW171S, MW240D, MW281S, MW282S, MW329, MW340S, MW344S)	1 Location (MW172)	2 Locations (MW342D, MW344D)
			PFBS	7 Locations (MW171S, MW240D, MW281S, MW282S, MW329, MW340S, MW354S)	-	1 Location (MW342D)

Area	On-base / Management Zone	Number of Locations in Area	Analyte	Trend Summary		
				Decreasing Trend	Increasing Trend	New Maximum
Former Fire Training Area (Facility 479)	On-base	5	PFOA	4 Locations (MW166, MW167, MW169D, MW169S)	-	-
			PFOS	5 Locations (MW166, MW167, MW168, MW169D, MW169S)	-	2 Locations (MW169D, MW169S)
			PFHxS	3 Locations (MW167, MW169D, MW169S)	-	
			PFOS+ PFHxS	5 Locations (MW166, MW167, MW168, MW169D, MW169S)	-	1 Location (MW169S)
			PFBS	4 Locations (MW166, MW167, MW169D, MW169S)	-	-
HWC Pump Station 7 (PS7)	On-base	6	PFOS	2 Locations (MW134D, MW134I)	-	-
			PFHxS	-	-	-
			PFOS+ PFHxS	2 Locations (MW134D, MW134I)	-	-
Lake Cochran	On-base	8	PFOA	1 Location (MW466)	4 Locations (MW108D, MW175D, MW179D, MW179S)	2 Location (MW179D, MW179S)
			PFOS	3 Locations (MW109D, MW466, MW468)	4 Locations (MW108S, MW175D, MW179D, MW179S)	-
			PFHxS	3 Locations (MW108S, MW466, MW468)	4 Locations (MW108D, MW175D, MW179D, MW179S)	-
			PFOS+ PFHxS	1 Location (MW466) -	3 Locations (MW108D, MW179D, MW179S)	-
			PFBS	3 Locations (MW108S, MW466, MW468)	2 Locations (MW108D, MW175D)	1 Location (MW179D)

Area	On-base / Management Zone	Number of Locations in Area	Analyte	Trend Summary		
				Decreasing Trend	Increasing Trend	New Maximum
Trade Waste Treatment (Facility 480)	On-base	8	PFOA	1 Location (MW106D)	-	-
			PFOS	1 Location (MW210S)	-	-
			PFHxS	3 Locations (MW106D, MW106S, MW210D)	1 Location (MW441)	1 Location (MW441)
			PFOS+ PFHxS	2 Locations (MW210D, MW210S)	-	-
			PFBS	2 Locations (MW210D, MW210S)	-	-
Cabbage Tree Road	Primary, Secondary, Broader and Outside Management Zone	13	PFOA	-	1 Location (MW126S)	1 Location (MW230S*)
			PFOS	1 Location (MW125S)	3 Locations (MW126S, MW178, MW125D)	2 Locations (MW126S, MW139*)
			PFHxS	2 Location (MW125S, POT107)	3 Locations (MW126S, MW178, MW230S)	4 Locations (MW125D*, MW230S, MW137*, MW139*)
			PFOS+ PFHxS	2 Location (MW125S, POT107)	4 Locations (MW126S, MW178, MW125D, MW230S)	1 Location (MW139*)
			PFBS	-	1 Location (MW178)	1 Location (MW230S*)
Southern Area	Primary Management Zone	11	PFOA	2 Locations (MW104D, MW184S)	-	-
			PFOS	2 Locations (MW104D, MW184S)	-	1 Location (MW731D)
			PFHxS	2 Locations (MW104D, MW184S)	-	
			PFOS+ PFHxS	3 Locations (MW104D, MW184D, MW184S)	-	1 Location (MW731D)
			PFBS	3 Locations	-	1 Location (MW731D)

Area	On-base / Management Zone	Number of Locations in Area	Analyte	Trend Summary		
				Decreasing Trend	Increasing Trend	New Maximum
				(MW104D, MW184D, MW184S)		
Southern Area - Cabbage Tree Road	Primary and Secondary Management Zone	6	PFOA	-	-	1 Location (MW271S*)
			PFOS	-	4 Locations (MW271S, MW146AD, MW146S)	2 Locations (MW271D, MW271S)
			PFHxS	-	1 Location (MW271S)	2 Locations (MW278D*, MW278S*)
			PFOS+ PFHxS	-	4 Locations (MW271S, MW146AD, MW146S)	1 Location (MW271D)
			PFBS	-	1 Location (MW271S)	1 Location (MW271S)
East of base - HWC Pump Station 9 (PS9)	Secondary and Broader Management Zone	14	PFOA	1 Location (MW132D)	1 Location (MW318D)	1 Location (MW318D)
			PFOS	1 Location (MW132I)	3 Locations (MW132D, MW318D, MW829)	3 Locations (MW318D, MW829, MW842)
			PFHxS	3 Locations (MW132D, MW132I)	2 Location (MW130D, MW318D)	2 Locations (MW318D, MW842*)
			PFOS+ PFHxS	2 Locations (MW132I,)	5 Locations (MW130D, MW318D, MW318S, MW829, MW159S)	3 Locations (MW318D, MW829, MW842)
			PFBS	1 Location (MW132D)	-	-
East of base – Moors Drain	Secondary Management Zone	6	PFOA	2 Locations (MW161D, MW247S)	-	-
			PFOS	3 Locations (MW161D, MW161S, MW247S)	2 Locations (MW121, MW247D)	-
			PFHxS	3 Locations	2 Locations	-

Area	On-base / Management Zone	Number of Locations in Area	Analyte	Trend Summary		
				Decreasing Trend	Increasing Trend	New Maximum
				(MW161D, MW161S, MW247S)	(MW121, MW247D)	
			PFOS+ PFHxS	3 Locations (MW161D, MW161S, MW247S)	2 Locations (MW121, MW247D)	-
East of base – Nelson Bay Road	Secondary Management Zone	3	PFOS	-	-	1 Location (MW122*)
			PFBS	-	-	1 Location (MW122*)
Fullerton Cove	Secondary and Broader Management Zone	22	PFOA			1 Location (MW538)
			PFOS	-	1 Location (MW270S)	11 Locations (MW142D*, MW142S*, MW144 , MW231S, MW270S, MW536, MW537, MW266S*, MW538, POT365*, POT382*)
			PFHxS	-	1 Location (MW270S)	5 Locations (MW144, MW536, MW537, MW266S*, MW538)
			PFOS+ PFHxS	-	1 Location (MW270S)	10 Locations (MW142D*, MW142S*, MW144 , MW231S, MW536, MW537, MW266S*, MW538 , POT365*, POT382*)
			PFBS	-	-	3 Locations (MW144, MW270S*, MW538)
Lavis Lane	Secondary and Broader Management Zone	6	PFOS	-	1 Location (MW128D)	-
			PFHxS	-	-	2 Location (MW128S, MW163*)
			PFOS+ PFHxS	-	1 Location (MW128D)	-

Area	On-base / Management Zone	Number of Locations in Area	Analyte	Trend Summary		
				Decreasing Trend	Increasing Trend	New Maximum
			PFBS	-	-	1 Location (MW163*)
Salt Ash	Secondary and Broader and Outside Management Zone	15	PFOA	2 Locations (MW123, MW252S)	-	
			PFOS	2 Locations (MW123, MW252S)	-	3 Locations (MW255S*, MW260D*, MW262S)
			PFHxS	3 Locations (MW123, MW260S, MW252S)	-	3 Locations (MW255S*, MW118*, MW262S)
			PFOS+ PFHxS	2 Locations (MW123, MW252S)	-	3 Locations (MW255S*, MW118*, MW262S)
			PFBS	2 Locations (MW123, MW252S)	-	1 Location (MW260D*)
South of base – Nelson Bay Road	Secondary Management Zone	2	PFOA	-	-	1 Location (MW150D)
West of base	Secondary and Broader and Outside Management Zone	7	PFOA	-	1 Location (MW315S)	-
			PFOS	1 Location (MW315D)	-	1 Location (MW241D)
			PFHxS	-	2 Locations (MW315D, MW280S)	2 Locations (MW107D, MW241S)
			PFOS+ PFHxS	-	2 Locations (MW107S, MW315D,)	2 Locations (MW107D, MW241D)
			PFBS	-	1 Location (MW315D)	2 Locations (MW107D, MW241S*)
North of base – Background	Outside Management Zone	2	PFOS	-	-	1 Location (MW264D*)
			PFHxS	-	-	1 Location (MW264D*)
			PFOS+ PFHxS	-	-	1 Location (MW264D*)

Notes:

(*) New detection reported due to lower LOR, no previous detection at standard LOR

BOLD text denotes a “Significant” new maximum, being > 1 order of magnitude above the historical maximum, or >1 order of magnitude above the standard laboratory LOR where historical concentrations were all below the standard LOR

7.3 Surface water results

7.3.1 Surface water field observations

Surface water field observations from the monitoring period are presented in **Table T3** in **Appendix B** and key observations are summarised below.

April 2025

- No visible signs of contamination were observed in the surface water locations sampled
- Organic and sulphurous odours were noted at SW582 and SW600
- Water flows were observed at approximately half the surface water locations with water depths varying between 0.5 m (at SW055 and SW007) and 2 m (at SW110 and SW023).

October 2025

- No visible signs of contamination were observed in the surface water locations sampled
- Organic and/or sulphurous odours were noted during sampling at SW600
- Water flows were observed at approximately half the surface water locations with water depths varying between 0.2 m (at SW582) and 2 m (at SW333).

7.3.2 Surface water quality parameters

Surface water quality parameters were measured during the collection of surface water samples. The surface water quality parameters for each event during the monitoring period are presented in **Table T3** in **Appendix B**, and summarised in **Table 13** for the monitoring period. The key findings were:

- Generally oxygenated conditions
- Generally fresh, with some brackish water (over 1,500 $\mu\text{S}/\text{cm}$)
- Mildly acidic to near neutral conditions
- Moderately oxidising to moderately reducing conditions
- Temperature ranges are considered consistent with background conditions for the time of year of the sampling being conducted in each event.

The water quality parameters reported during the monitoring period were generally within historical data ranges.

Table 13 Summary of surface water quality parameters

Sampling Event	Dissolved Oxygen [in mg/L]		Temperature (°C)		Electrical Conductivity (µS/cm)		pH (pH units)		Oxidation-Reduction Potential, corrected (mV)	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
On-base										
April 2025	1.39 (SW588)	7.22 (SW582)	20.9 (SW055)	21.9 (SW588)	86.4 (SW048)	159.2 (SW588)	5.31 (SW048)	6.67 (SW110)	16.8 (SW582)	162.4 (SW048)
October 2025	1.07 (SW588)	7.08 (SW108)	17.0 (SW588)	19.8 (SW108)	91.4 (SW048)	168.8 (SW588)	5.34 (SW048)	6.59 (SW110)	-119.4 (SW588)	157.6 (SW110)
Primary Management Zone										
April 2025	2.32 (SW060)	2.93 (SW333)	18.3 (SW060)	20.3 (SW333)	333.4 (SW060)	614 (SW333)	5.46 (SW060)	6.12 (SW333)	18.3 (SW333)	99.6 (SW060)
October 2025	1.55 (SW333)	4.35 (SW060)	17.0 (SW333)	19.2 (SW060)	194.1 (SW060)	197 (SW333)	5.77 (SW060)	5.97 (SW333)	3.0 (SW333)	139.5 (SW060)
Secondary Management Zone										
April 2025	2.15 (SW059)	9.72 (SW600)	17.9 (SW006)	26.3 (SW600)	126.4 (SW009)	1,338 (SW600)	5.09 (multiple)	7.21 (SW019)	-17.8 (SW019)	185.1 (SW059)
October 2025	1.29 (SW059)	8.61 (SW007)	15.2 (SW059)	19.3 (SW007)	121 (SW019)	1,163 (SW023)	5.71 (SW001)	7.46 (SW006)	-74.2 (SW600)	135.5 (SW019)
Broader Management Zone										
April 2025	1.66 (SW062)	6.81 (SW259)	10.8 (SW062)	22.7 (SW259)	157.8 (SW014)	9,934 (SW259)	5.47 (SW081)	6.97 (SW024)	20.0 (SW259)	183.3 (SW081)
October 2025	2.1 (SW081)	6.4 (SW005)	15.8 (SW081)	19.2 (SW259)	191.3 (SW014)	9,555 (SW024)	6.22 (SW014)	7.05 (SW062)	-30.5 (SW079)	115.6 (SW024)

7.3.3 Surface water analytical results

Surface water analytical results from the monitoring period as well as the available historical surface water analytical results for OMP sampling locations (including data from other projects) are presented in **Table T6** in **Appendix B**. A summary of surface water results for each event during the monitoring period are provided in **Table 14**.

Surface water results for PFOS+PFHxS and PFOA across the monitoring period (the highest concentrations at each location) are presented spatially on **Figure F13** to **Figure F14** in **Appendix A**. Additionally, OMP and other historical concentrations of PFOS+PFHxS and PFOA for surface water are displayed graphically on temporal trend graphs in **Appendix C**, grouped by catchment/area of interest.

The interpretive assessment of the surface water analytical results is discussed in detail in **Section 8.0**.

Overall, the data presented suggests that concentrations of PFAS in surface water are variable, with some locations reporting higher concentrations during the summer (drier months) when compared to the wetter and colder winter months. At on-base surface water location SW048, a potential increasing trend is visible for PFOS+PFHxS (refer to **Graph G146** in **Appendix C**), noting that the new maximum reported during the 2025 monitoring period was within the same order of magnitude as historical results. The remaining on-base locations showed no potential trends with majority of the reported concentrations during the monitoring period being within the historical ranges. No significant deviations from the historical surface water data were identified during the monitoring period (refer to **Figure F18** in **Appendix A**).

Table 14 Summary of PFOA, PFOS and PFOS+PFHxS concentrations in surface water

Sampling Event	No. of Samples ¹	Compound	Concentration Range [in µg/L] in Sampling Event (Location/s)	No. of Samples ¹ with Concentration > LOR	No. of Samples ¹ with Exceedances of Human Health Criteria	No. of Samples ¹ with Exceedances of Ecological Criteria
On-base						
April 2025	7 Primary, 1 QC	PFOA	<LOR (SW588) to 0.13 (SW047)	7	0	0
		PFOS	0.14 (SW588) to 6.91 (SW047)	8	NA	8
		PFOS+PFHxS	0.18 (SW588) to 8.1 (SW047)	8	6	NA
October 2025	7 Primary, 2 QC	PFOA	0.02 (SW588) to 0.1 (multiple)	9	0	0
		PFOS	1.02 (SW048) to 4.52 (SW108)	9	NA	9
		PFOS+PFHxS	1.34 (SW588) to 5.33 (SW108)	9	7	NA
Primary Management Zone						
April 2025	2 Primary	PFOA	0.13 (SW333) to 0.4 (SW060)	2	0	0
		PFOS	1.56 (SW333) to 9.56 (SW060)	2	NA	2
		PFOS+PFHxS	3.98 (SW333) to 19 (SW060)	2	2	NA
October 2025	2 Primary 2 QC	PFOA	0.04 (SW333) to 0.96 (SW060)	2	0	0
		PFOS	0.67 (SW333) to 27.1 (SW060)	2	NA	2
		PFOS+PFHxS	1.24 (SW333) to 37.5 (SW060)	2	1	NA
Secondary Management Zone						
April 2025	9 Primary 2 QC	PFOA	<LOR (multiple) to 0.09 (SW059)	8	0	0
		PFOS	0.08 (SW019) to 7.67 (SW007)	11	NA	11
		PFOS+PFHxS	0.2 (SW023) to 8.43 (SW007)	11	7	NA
October 2025	8 Primary 2 QC	PFOA	<LOR (multiple) to 0.78 (SW006)	5	0	0
		PFOS	<LOR (SW007) to 22.2 (SW006)	9	NA	9
		PFOS+PFHxS	0.02 (SW007) to 29.6 (SW006)	10	3	NA

Sampling Event	No. of Samples ¹	Compound	Concentration Range [in µg/L] in Sampling Event (Location/s)	No. of Samples ¹ with Concentration > LOR	No. of Samples ¹ with Exceedances of Human Health Criteria	No. of Samples ¹ with Exceedances of Ecological Criteria
Broader Management Zone						
April 2025	9 Primary 1 QC	PFOA	<LOR (multiple) to 0.06 (multiple)	3	0	0
		PFOS	<LOR (multiple) to 0.95 (SW259)	7	NA	7
		PFOS+PFHxS	<LOR (multiple) to 1.91 (SW259)	7	0	NA
October 2025	7 Primary 2 QC	PFOA	<LOR (multiple) to 0.06 (SW259)	6	0	0
		PFOS	<LOR (SW081) to 1.29 (SW259)	8	NA	8
		PFOS+PFHxS	<LOR (SW081) to 2.07 (SW259)	8	1	NA

Notes:¹ = Sample counts include intra-laboratory and inter-laboratory duplicates

multiple = the value applies to multiple locations

NA = Not applicable – where there are no applicable Human Health screening criteria for PFOS, and no applicable Ecological screening criteria for the sum of PFOS + PFHxS.

QC = Quality Control (sample)

7.4 Sediment Results

7.4.1 Sediment field observations

Sediment field observations from the monitoring period are presented in **Table T4** in **Appendix B**.

The sediment comprised of sand, silt and clay materials, some with trace gravels and shell fragments, and some inclusive of organic matter in the form of roots, leaves and/or grass. Organic odours were noted during the April 2025 sampling event, at SD005, SD081 and SD600, while during the October 2025 sampling event, an organic odour was noted at SD600, and a sulphurous odour was noted at SD001.

7.4.2 Sediment analytical results

Sediment analytical results from the monitoring period as well as the available historical sediment analytical results (including data from other projects) are presented in **Table T7** in **Appendix B**. A summary of sediment results for each event during the monitoring period are provided in **Table 15**.

Sediment results for PFOS+PFHxS and PFOA across the monitoring period (the highest concentrations at each location) are presented spatially on **Figure F15** to **Figure F16** in **Appendix A**. Additionally, OMP and other historical concentrations of PFOS+PFHxS and PFOA for sediment have been displayed graphically on temporal trend graphs in **Appendix C**, grouped by catchment/area of interest.

The interpretive assessment of the sediment analytical results is discussed in detail in **Section 8.0**.

Overall, based on the analytical tables and the temporal trend graphs, concentrations of PFAS in sediment were generally stable, with majority of the concentrations reported during the monitoring period being within the historical range and/or within the same order of magnitude of historical results. New maximum concentrations were recorded in the monitoring period at SD326 and SD254 in Fullerton Cove (tidal gate outlet) and in SD600 in Fourteen Foot Drain; however, these are not significant new maximums, given they were within the same order of magnitude as historical results. No significant deviations from the historical sediment data were identified during the monitoring period (refer to **Figure F19** in **Appendix A**).

Table 15 Summary of PFOA, PFOS and PFOS+PFHxS concentrations in sediment

Sampling Event	No. of Samples ¹	Compound	Concentration Range [in mg/kg] in Sampling Event (Location/s)	No. of Samples ¹ with Concentration > LOR
On-base				
April 2025	5 Primary	PFOA	<LOR (multiple) to 0.0014 (SD110)	3
		PFOS	0.0031 (SD048) to 0.224 (SD108)	5
		PFOS + PFHxS	0.0041 (SD048) to 0.235 (SD108)	5
October 2025	5 Primary	PFOA	<LOR (multiple) to 0.0014 (SD047)	3
		PFOS	0.0033 (SD048) to 0.18 (SD108)	5
		PFOS + PFHxS	0.0041 (SD048) to 0.185 (SD108)	5
Primary Management Area				
April 2025	2 Primary	PFOA	<LOR (SD060) to 0.0005 (SD333)	1
		PFOS	0.0142 (SD060) to 0.0165 (SD333)	2
		PFOS + PFHxS	0.0147 (SD060) to 0.0269 (SD333)	2
October 2025	2 Primary	PFOA	<LOR (SD333) to 0.0013 (SD060)	1
		PFOS	0.0117 (SD333) to 0.129 (SD060)	2

Sampling Event	No. of Samples ¹	Compound	Concentration Range [in mg/kg] in Sampling Event (Location/s)	No. of Samples ¹ with Concentration > LOR
		PFOS + PFHxS	0.0227 (SD333) to 0.142 (SD060)	2
Secondary Management Zone				
April 2025	9 Primary, 2 QC	PFOA	<LOR (multiple) to 0.0013 (SD006)	6
		PFOS	0.0003 (SD059) to 0.735 (SD006)	11
		PFOS + PFHxS	0.0003 (SD059) to 0.752 (SD006)	11
October 2025	8 Primary	PFOA	<LOR (multiple) to 0.001 (SD600)	2
		PFOS	0.0003 (SD023) to 0.0395 (SD600)	8
		PFOS + PFHxS	0.0003 (SD023) to 0.0434 (SD600)	8
Broader Management Zone				
April 2025	7 Primary, 2 QC	PFOA	<LOR (multiple) to 0.0005 (SD014)	1
		PFOS	0.001 (SD062) to 0.0717 (SD014)	9
		PFOS + PFHxS	0.0012 (SD062) to 0.0786 (SD014)	9
October 2025	7 Primary 4 QC	PFOA	<LOR (multiple) to 0.0003 (multiple)	2
		PFOS	<LOR (SD062) to 0.0391 (SD014)	10
		PFOS + PFHxS	<LOR (SD062) to 0.0412 (SD014)	10
Outside Broader Management Zone				
April 2025	3 Primary	PFOA	<LOR (SD255) to 0.0056 (SD326)	2
		PFOS	0.017 (SD255) to 0.164 (SD326)	3
		PFOS + PFHxS	0.0176 (SD255) to 0.17 (SD326)	3
October 2025	3 Primary	PFOA	<LOR (multiple) to 0.0004 (SD254)	1
		PFOS	0.0049 (SD326) to 0.0454 (SD254)	3
		PFOS + PFHxS	0.0049 (SD326) to 0.0468 (SD254)	3

Notes:¹ = Sample counts include intra-laboratory and inter-laboratory duplicates

multiple = the value applies to multiple locations

QC = Quality Control (sample)

7.5 Non-OMP data

Groundwater, surface water, soil and sediment samples were collected as part of PFAS characterisation projects or ad-hoc sampling during the monitoring period at the base and off-base properties within Management Area as summarised in **Table 16** to **Table 20**, below.

Table 16 Summary of non-OMP sampling – Surface Water

Sampling Project (date)	Locations sampled	Compound	Concentration range (µg/L) (location of highest concentration)
Eastern Region Investigation (3 events) (May 2025 – October 2025)	9	PFOS+PFHxS	<0.01 – 8.43 (SW007, April 2025)
		PFOA	<0.01 – 0.08 (SW007, April 2025)

Sampling Project (date)	Locations sampled	Compound	Concentration range (µg/L) (location of highest concentration)
Dawsons Drain Investigation (3 events) (March 2025 – May 2025)	15	PFOS+PFHxS	0.55 – 11.2 (SW330, March 2025)
		PFOA	0.02 – 0.42 (SW330, April 2025)
Facility 165 Remediation Investigation (November 2025 – December 2025)	14	PFOS+PFHxS	1.54 – 26.3 (SW607, November 2025)
		PFOA	0.02 – 0.23 (SW048 and SW607, December 2025)
Ad Hoc – Private Property Sampling Requests (February 2025 and June 2025)	3	PFOS+PFHxS	<0.01 – 1.83 (SW410, February 2025)
		PFOA	<0.01 – 0.06 (SW062, June 2025)

Table 17 Summary of non-OMP sampling – Groundwater

Sampling Project	Locations sampled	Compound	Concentration range (µg/L) (location of highest concentration)
Facility 165 Remediation Investigation (November 2025 – December 2025)	40	PFOS	<0.02 – 37.0 (BH196, November 2025)
		PFHxS	<0.01 – 12.7 (BH714, November 2025)
		PFOA	<0.01 – 2.48 (BH714, November 2025)
		PFBS	<0.02 – 0.41 (BH714, November 2025)
Ad Hoc – Private Property Sampling Request (February 2025)	2	PFOS	<0.01 (POT259 and POT260)
		PFHxS	<0.01 – 0.02 (POT260)
		PFOA	<0.01 (POT259 and POT260)
		PFBS	<0.01 – 0.02 (POT260)

Table 18 Summary of non-OMP sampling – Soil

Sampling Project (date)	Locations sampled	Compound	Concentration range (mg/kg) (location of highest concentration)
Facility 165 Remediation Investigation (November 2025 – December 2025)	95	PFOS+PFHxS	0.0041 – 3.63 (BH657, November 2025)
		PFOA	<0.0001 - 0.0080 (BH709, November 2025)
Ad Hoc – Private Property Sampling (April 2025 and October 2025)	3	PFOS+PFHxS	0.0003 – 0.0023 (SS336, October 2025)
		PFOA	<0.0002 (SS332, April 2025; SS336 and SS337, October 2025)

Table 19 Summary of non-OMP sampling – Other

Sampling Project (date)	Locations sampled	Compound	Concentration range (mg/kg) (location of highest concentration)
Ad Hoc – Private Sampling Property Request (October 2025)	1	PFOS+PFHxS	0.0505 (OTH095)
		PFOA	0.0007 (OTH095)

Table 20 Summary of non-OMP sampling – Biota

Sampling Project (date)	Locations sampled	Compound	Concentration range (mg/kg) (location of highest concentration)
Ad Hoc – Private Sampling Property Request (February 2025)	4	PFOS+PFHxS	<0.001 (BIOTFL094 to BIOTFL097)
		PFOA	<0.001 (BIOTFL094 to BIOTFL097)

8.0 Interpretive analysis and discussion

The assessment of analytical results from this monitoring period against the OMP trigger levels and associated responses is presented in **Table 21**.

Table 21 Trigger levels Assessment

Trigger	Discussion
Spatial and temporal variability	
First-time detect of PFAS at a monitoring location not associated with a known on-base PFAS source area that may suggest that an off-base source unrelated to Defence activities is present. <i>To be considered potentially significant if above relevant screening criteria and repeat detections occur over two subsequent monitoring events.</i>	During the 2025 monitoring period, there were a number of groundwater locations that reported first-time detections of PFAS compounds, however they are not considered to suggest the presence of an off-base source unrelated to Defence activities. During the April 2025 event, first-time detections of one or more PFAS were reported in two groundwater locations outside of the Williamstown Management Area, being MW262S to the east of Salt Ash, and MW264D to the north (up hydraulic gradient) of the base. Given that PFAS were not reported in these two locations during the subsequent October 2025 event, they are not considered to be significant. Also, during the April 2025 event, six groundwater locations (MW118, MW139, MW142D, MW142S, MW266S and POT365) within the BMZ reported first-time detections of one or more PFAS. The reported concentrations of PFAS in these samples were due to the use of low-level detection method (below the standard LOR). However, with the exception of MW266S the detections were not repeated during the subsequent October 2025 event. The reported PFAS concentrations in MW266S were below the adopted human health (drinking water) screening criteria. Therefore, these first-time detections are not considered to be significant given that low concentrations of PFAS are expected across the BMZ. There were no first-time detections of PFAS in the surface water and sediment samples analysed during the 2025 monitoring period.
First-time detect of PFAS at a monitoring location down gradient of the PFAS plume that suggests PFAS migration is occurring. <i>To be considered potentially significant if above relevant screening criteria and repeat detections occur over two subsequent monitoring events</i>	During the 2025 monitoring period, first-time detections of PFAS were reported in four groundwater wells (MW144, MW536, MW537 and MW538) located between the base and Fullerton Cove. Monitoring locations MW144, MW536 and MW537 are located within the Secondary Management Zone and are located adjacent to Dawsons Drain. MW538 is located approximately 100m further south within the Broader Management Zone and is adjacent to the Fourteen Foot Drain. It is noted that these wells had not been sampled

Trigger	Discussion
	since 2017, at which time concentrations of PFAS were below the laboratory LOR. AECOM considers that the detections of PFAS over two subsequent monitoring events in these wells during the 2025 monitoring period indicate that surface water / groundwater interactions along Dawsons Drain and the Fourteen Foot Drain have contributed to the PFAS being detected in the monitoring wells in this area. Defence will continue to monitor PFAS in this area under the OMP.
New maximum at a monitoring location (a concentration that is considered to be “significant” within the context of the CSM) <i>Note that new maximum concentrations reported within a known PFAS source area is likely to be less “significant” to the CSM than a new maximum reported outside (upgradient or downgradient) of a known PFAS source area.</i> <i>Consider laboratory variability of 30%.</i> <i>*Significant is considered to be one order of magnitude higher or greater than historical ranges.</i>	During the 2025 monitoring period, several groundwater locations reported new maximum concentrations of PFAS. With the exception of locations MW144, MW169S and MW538, the reported new maximum concentrations were noted to be either within one order of magnitude of historical maximums, or within one order of magnitude of the standard laboratory LOR and therefore are not considered to be significant. Given that MW169S is located on-base within a known source area (FFTA), the new maximum concentration for PFOS (3.15 µg/L) is not considered to be significant in the context of the CSM. The new maximum concentration for PFOS (0.189 µg/L) and PFOS+PFHxS (0.276 µg/L) in MW144 and PFOS+PFHxS (0.548 µg/L) in MW538, both located south of the base near Fullerton Cove (adjacent to the 14 Foot Drain) may be an indicator that surface water / groundwater interaction is contributing to the new maximum concentrations in this area. It is noted that this was the first time these two wells had been sampled since 2017, and there is insufficient data to determine whether these new maximums indicate increasing trends. Defence will continue to monitor PFAS in this area under the OMP. Concentrations of PFAS were either within the historical range, or within an order of magnitude of the historical maximums, in the surface water and sediment samples analysed during the monitoring period.

Trigger	Discussion
Increasing trend in groundwater concentrations at base boundary or off-base monitoring locations <i>Trends are to be determined using a statistical tool (i.e. Mann-Kendall) with a minimum of four (4) data points with concentrations greater than the laboratory LOR.</i>	Statistical analysis of groundwater data (current and historical) identified increasing trends of one or more of PFOS, PFHxS, PFOA and/or PFBS at numerous locations on base boundary and off-base areas, as summarised below: • four on-base locations (MW108D, MW108S, MW342D, MW344D) in the Western Region, specifically on the southern boundary of the base. The increasing trend of PFAS concentrations in these locations are associated with the migration of the leading edge of the Western Region plume originating from the FFTA and are consistent with predictions of the historical groundwater modelling. It is noted that groundwater in this area is captured and treated by the Western Region WTP • Six on-base locations (MW172, MW175D, MW179S, MW179D, MW202D and MW441) in the Central Region. Concentrations of PFAS in groundwater at these locations appear to be variable and have typically been within the same order of magnitude since first sampled in 2016. The statistical increasing trends identified at these locations are therefore not considered to be significant in the context of the CSM • three off-base locations (MW126S, MW178 and MW271S) within the Primary Management Zone to the south of the base. While the statistical tool reports that increasing trends are present for PFOS, PFHxS, PFOA and/or PFOS+PFHxS in these locations, a review of the temporal trend graphs (Graphs 1 – 8 in Appendix C) indicates that concentrations in these wells fluctuate over time and have typically remained within the same order of magnitude over the past seven years of monitoring. Therefore, the statistical increasing trends identified in these locations are not considered to be significant in the context of the CSM • four off-base locations (MW125D, MW230S, MW146AD, MW146S) within the Secondary Management Zone to the south of the base. While the statistical tool reports that increasing trends are present for PFOS, PFHxS, PFOA and/or PFOS+PFHxS in these locations, a review of the temporal trend graphs (Graphs G1 – G8 in Appendix C) indicates that the statistically increasing trends are more associated with the adoption of the lower laboratory LOR during the current monitoring period and that concentrations of PFAS in these wells have typically remained within the

Trigger	Discussion
	same order of magnitude since monitoring commenced in 2017. Therefore, the statistical increasing trends identified in these locations are not considered to be significant in the context of the CSM - Seven off-base locations within the Secondary Management Zone to the east of the base, including four (MW130D, MW132D, MW318D, MW318S and MW829) near HWC Pump Station 9 and two (MW121, MW247D) along Moors Drain. A review of the historical PFAS concentration data for MW130D and MW318S suggest that the statistically increasing trend at these locations are associated with the adoption of a lower laboratory limit of reporting during the current monitoring period. PFAS concentrations have consistently been either below the standard laboratory LOR, or within one order of magnitude of the standard laboratory LOR. Therefore, these statistically increasing trends are not considered to be significant in the context of the CSM. Similarly, a review of historical analytical data for monitoring locations MW121, MW132D, MW247D, MW318D and MW829 indicates that concentrations of PFAS have been variable but typically within the same order of magnitude over the past seven year and are not considered to be significant in the context of the CSM. - three off-base locations (MW107S, MW315D, MW315S) within the Secondary Management Zone, to the west of the base. In MW107S and MW315S, concentrations of PFAS in these wells have historically been low (either below the standard LOR, or trace levels reported above the lower-level LOR). Given that concentrations have remained below the NHMRC drinking water guidelines in these wells since 2021, the statistically increasing trends are not considered to be significant in the context of the CSM. At location MW315D, a review of the historical groundwater data in Table T5 (Appendix B) and the temporal trend graphs (G105 to G108 in Appendix C) indicates that there is likely an increasing trend present. This increasing trend may be associated with the migration of the Western Region plume in the deep zone, and will continue to be monitored to assess whether it constitutes a change to the CSM - Four off-base locations within the Broader Management Zone, including one to the east of HWC Pump Station 9 (MW159S), one in the vicinity of

Trigger	Discussion
	Fullerton Cove (MW270S), two to the southeast of the base in the vicinity of Lavis Lane (MW128D and MW280S) and one to the west of the base (MW280S). While statistical increasing trends were reported for these locations, a review of the historical PFAS concentration data (Table T5 in Appendix B) for these locations indicate that concentrations are consistently low, either below the laboratory LOR, or within the same order of magnitude as historical results. Therefore, the statistical increasing trends are not considered to be significant in the context of the CSM
Decreasing trend in groundwater concentrations at a monitoring location or within a specified area <i>Trends are to be determined using a statistical tool (i.e. Mann-Kendall) with a minimum of four (4) data points with concentrations greater than the laboratory LOR.</i> <i>Monitoring locations may be considered to be removed from the OMP if no longer required to assess the CSM and risk profile.</i>	Statistical analysis of groundwater data (current and historical) identified decreasing trends of one or more PFAS in numerous on- and off-base areas, as discussed below: • 13 on-base locations (MW166, MW167, MW168, MW169D, MW169S, MW171S, MW240D, MW281S, MW282S, MW329, MW340S, MW344S, MW354S) within the Western Region, associated with the FFTA. The decreasing trends are likely associated with the reduction in concentrations at the “tail” of the western plume as it moves south. • two on-base locations (MW134D, MW134I) at the HWC Pump Station 7 area. The reason for the decreasing PFAS trend at these locations is unknown, however given the lack of PFAS sources in this area, it is not unexpected. • six on-base locations within the Central Region, including two (MW196 and MW202S) at the Former and Current Fire Station and four (MW108S, MW109D, MW466, MW468) near Lake Cochran. These localised decreasing trends are considered likely to be attributed to removal of ongoing PFAS sources, including historical remedial activities undertaken at the Former and Current Fire Station (Facility 165) in 2019 and 2020. • three on-base locations (MW106D, MW106S, MW210D) in the Central Region near the Trade Waste Treatment facility. The cause of the decreasing trend at this location is unknown, however it will continue to be monitored during future sampling events. • three off-base locations (MW104D, MW184D, MW184S) in the Primary Management Zone, specifically within the Southern Area. The decreasing concentrations of PFAS at these locations within the Primary

Trigger	Discussion
	Management Zone area likely to be associated with the southerly migration of the Central Region plume, and the contraction of the tail end as it passes these locations • 11 off-base locations within the Secondary Management Zone, including one (MW125S) location along Cabbage Tree Road, three (MW132D, MW132I, MW897D) east of base near HWC Pump Station 9, three (MW161D, MW161S, MW247S) east of the base along Moors Drain, two (MW123, MW260S) locations in Salt Ash and one (MW315D) location to the west of the base. The decreasing trends in these locations are not attributed to any single factor or action and are considered to represent localised variability in the distribution of PFAS off base within the Secondary Management Area. • two off-base locations within the Broader Management Zone, including one (MW252S) near Salt Ash and one (POT107) along Cabbage Tree Road. The decreasing trends are considered to be associated with localised variability, rather than indicative of broader decreasing trends in the Broader Management Zone.
Changes to the CSM	
New human health or ecological receptor or exposure path identified associated with a known on-base source area. <i>New information regarding exposure pathways or receptors may be identified via an updated water use survey, change in land use, new monitoring location, or field observations.</i>	No new human health or ecological exposure pathways associated with a known on-base source area were identified during the 2025 monitoring period that have not previously been identified and assessed.
Drinking water pathway identified in off-base property directly associated with a known on-base source area. <i>New information regarding exposure pathways or receptors may be identified via an updated water use survey, change in land use, new monitoring location, or field observations.</i>	No new drinking water pathways in off-base properties associated with a known on-base source area were identified during the 2025 monitoring period.

Trigger	Discussion
Recreational water pathway identified in off-base property directly associated with a known on-base source area. <i>New information regarding exposure pathways or receptors may be identified via an updated water use survey, change in land use, new monitoring location, or field observations.</i>	No new recreational water pathway was identified in off-base properties directly associated with a known on-base source area during the 2025 monitoring period.
Human Health and Ecological Receptors	
New exceedance of published screening criteria of an off-base or base boundary monitoring location down gradient of an identified PFAS source area, that suggests PFAS migration from a known PFAS source area <i>To be considered potentially significant if repeat exceedances occur over two subsequent monitoring events.</i>	The first-time exceedances of human health and/or ecological screening criteria for PFOS and/or PFHxS in monitoring wells MW144, MW536, MW537 and MW538 during the 2025 monitoring period may be indicative surface water/groundwater interactions along Dawsons Drain and the 14-foot drain contributing to new maximums in this area. Additionally, first time exceedances of the adopted new ecological screening criteria for PFOS were reported in six off-base groundwater locations (MW231S, MW262S, MW271S, MW536, MW537, MW842) during the monitoring period. Given that historically the concentrations of PFOS exceeded the previous ecological criteria (PFAS NEMP, 2020), the exceedance of the new criteria is not considered to be material as it does not change the conclusions of the ERA (AECOM, 2018) and the risk profile. No other new exceedances of published screening criteria which are considered to be potentially significant were reported during the 2025 monitoring period.
First-time exceedance in groundwater of the groundwater exposure point concentration (EPC) used in the 2017 HHRA for the relevant Risk Zone: Risk Zone A PFOS+PFHxS: 190.3 µg/L Risk Zone B PFOS+PFHxS: 5.67 µg/L Risk Zone C & D	There were no first-time exceedances of the groundwater EPC in Risk Zone A or Risk Zone B during the 2025 monitoring period. First time exceedances of the groundwater EPCs for PFOS+PFHxS in Risk Zone C & D were reported during the April 2025 monitoring event in the following locations: • MW144 (0.086 µg/L) [Risk Zone C] • MW231S (0.1 µg/L) [Risk Zone C] • MW536 (0.052 µg/L) [Risk Zone C]

Trigger	Discussion
PFOS+PFHxS: 0.05 µg/L	• MW538 (0.43 µg/L) [Risk Zone C] First-time exceedances of the groundwater EPCs for PFOS+PFHxS in Risk Zone C & D were reported during the October 2025 monitoring event in the following locations: • MW271D (0.054 µg/L) [Risk Zone C] • MW537 (0.074 µg/L) [Risk Zone C] Given that all the locations which reported first-time exceedances of the groundwater EPCs were within the Williamstown Management Area, there are no changes to the associated risk profile given that these areas are subject to precautionary advice to minimise exposure to PFAS.
First-time exceedance in surface water of the surface water EPC used in the 2017 HHRA: Marine Water PFOS: 1.78 µg/L, PFHxS: 1.48 µg/L Region 1 PFOS: 5.035 µg/L, PFHxS: 1.666 µg/L Region 2 PFOS: 1.47 µg/L, PFHxS: 1.009 µg/L Region 3 PFOS: 7.743 µg/L, PFHxS: 6.773 µg/L	First time exceedance of the surface water EPC for PFHxS in Region 1 was reported during the October 2025 monitoring event in Moors Drain sample SW006 (7.36 µg/L). No other first-time exceedances of the surface water EPCs were reported during the 2025 monitoring period. Given that the location of SW006 falls within the Secondary Management Zone, there are no changes to the associated risk profile given that this area is subject to precautionary advice to minimise exposure to PFAS.

Trigger	Discussion
Other Considerations	
Changes to Precautionary Advice by NSW Government <i>The OMP will consider any changes made by the NSW Government to precautionary advice.</i>	There were no changes to the NSW Government precautionary advice relating to the Williamstown Management Area during the 2025 monitoring period.
Changes to endorsed screening criteria in Australia	During the 2025 monitoring period, the updated NHMRC (2025) drinking water screening criteria for PFOS, PFHxS, PFOA and PFBA were finalised. These revised criteria have subsequently been adopted for the OMP, superseding the PFAS NEMP 3.0 (2025) values. The lower screening criteria for PFOS (by an order of magnitude) has resulted in new first-time exceedances during this morning period at locations that were previous below the former PFAS NEMP 3.0 (2025) drinking water criteria. In March 2026 (following the 2025 monitoring period), revised Australian and New Zealand Guidelines were released for PFOS in water for ecological receptors. The revised 99% ecological protection value (0.02 µg/L) is two orders of magnitude higher than the previous value (0.00023 µg/L). This has resulted in fewer ecological exceedances in surface water and groundwater.

Notes: Risk Zones and Regions as defined in the HHRA (AECOM, 2017b), detailed below.

- **Marine Water:** various water bodies such as those associated with Port Stephens and Hunter River (i.e. Fullerton Cove for the purpose of the OMP)
- **Region 1:** the area east of the base, generally following Moors Drain and discharging at the tidal portion of Tilligerry Creek.
- **Region 2:** the area along Tilligerry Creek southeast of the base which discharges in the tidal portion of Tilligerry Creek
- **Region 3:** the surface water drainage network south of the base, which predominantly discharges at Fullerton Cove.
- **Risk Zone A** is defined by the footprint of the Southern Area, which includes a portion of Region 3.
- **Risk Zone B** is defined by the footprint of the Eastern Area, which includes a portion of both Region 1 and Region 3.
- **Risk Zone C** is defined by that portion of the footprint of the remaining area, which corresponds with Region 1 and Region 3.
- **Risk Zone D** is defined by that portion of the footprint of the remaining area, which corresponds with Region 2.

9.0 Conceptual Site Model

The updated PMAP (Defence, 2023b) provides a revised CSM summarising the linkages between sources, exposure pathways and receptors.

The OMP sampling events over the monitoring period have provided additional data to further understand the changing conditions of the PFAS concentrations in groundwater, surface water and sediment.

Although some localised changes were noted to the plume extents on-base as a result of remediation activities, the PFAS transport mechanisms and the general extent of the PFOS+PFHxS plume (size and shape) (refer to **Figure F20** in **Appendix A**) are inferred to remain similar to that reported previously. **Figure F20** provides the extent of the plume above former drinking water criteria of 0.07 µg/L to enable comparison to the plume map in the 2024 OMR. An additional plume map has also been prepared (refer to **Figure F21** in **Appendix A**) to show the approximate extent of the plume where concentrations of PFOS are greater than the current drinking water guideline value of 0.008 µg/L.

The inferred extent of the PFAS plume on **Figure F21** for PFOS only at low level detection limit is generally consistent with the geometry of the PFOS+PFHxS maps those reported in previous OMRs and the DSI (AECOM, 2017a) with the following exceptions:

- the inferred extent of PFOS (0.008 µg/L – 10 µg/L) in groundwater between the Cabbage Tree Road and Fullerton Cove has increased, largely due to the first-time detections of PFAS in monitoring wells MW144, MW536, MW537 and MW538. It is noted however that these first-time detections are likely to be attributed to surface water/groundwater interactions, rather than migration of the Central Region plume
- the inferred extent of PFOS (>LOR to 0.008 µg/L) in Salt Ash has been refined due to the adoption of the lower LOR in these areas.

Groundwater remains the primary pathway for PFAS migration from the base. The ongoing treatment of groundwater at the Western Region (FFTA), and Central Region (area south of Lake Cochran) coupled with previous source removal (excavation) activities at the sources in these areas, have reduced the localised PFAS concentrations in groundwater at the base. However, the on-base source-pathway-receptor (SPR) linkages identified in the CSM remain unchanged. PFAS-impacted groundwater continues to migrate south from these source areas beyond the base boundary and SPR linkages for off-base areas remain unchanged.

Surface water drainage, including interaction between surface water drains and groundwater, remains the other a significant pathway for PFAS migration from the base. The key drainage channels that drain surface water from the base to off-base areas include:

- Western and Central Regions: Dawsons Drain and Leary's Drain and (indirectly) Fourteen Foot Drain and Ten Foot Drain to the south of the base, which discharge to Fullerton Cove. Groundwater is known to upwell into Dawsons Drain and Leary's Drain, providing a direct migration pathway for PFAS-impacted groundwater to enter these drainage lines and Fullerton Cove beyond.
- Eastern Region: Moors Drain which receives runoff from the on-base piped stormwater drainage network and discharges to Tilligerry Creek. Notably the on-base stormwater network within the Eastern Region is known to interact with the shallow groundwater and provides a direct migration pathway for PFAS impacted groundwater to enter the off-base surface water environment at Moors Drain.

Despite the sandy, porous nature of the soils in the Management Area, heavy rainfall can exceed the soil infiltration rate, resulting in ponding and/or runoff on the surface and flooding, and influence the migration of PFAS into downstream sediments. Given the shallow depth to groundwater, it is also likely that these occurrences, which are transient, represent water table outcrop. Concentrations of PFAS in sediment have fluctuated over time however generally remain within the same order of magnitude as historical ranges.

No significant changes to the SPR linkages and migration mechanisms identified for surface water and sediment were apparent during the monitoring period.

The current CSM is presented in **Table 22** below and illustrated as a conceptual schematic figure in **Appendix F**.

Table 22 Conceptual Site Model

Primary Sources	Secondary Sources	Transport Mechanisms	Exposure Pathways	Exposed Population Characterisation / Receptor	Exposure pathway complete?	Risk	Risk Management
On-base areas where fire-fighting retardants/ suppression foams (primarily AFFF) have been discharged or released to the environment. PFAS soaks into soil and/or infrastructure from where it can be eroded as sediment or leached by rainwater or flood water and migrate to groundwater, or dissolve in surface water runoff and potentially travel to affect other media.	PFAS in shallow soil (<1.9 m).	Water and wind erosion of soil and atmospheric dispersion of soil and dust. Excavation and re-location of soil during construction activities.	Human health: direct contact with PFAS in soil during intrusive works (i.e. excavations)	Commercial/ Intrusive maintenance workers	Potentially complete	Potential for exposure to occur under incidental ingestion of soil and direct contact with soil (including during intrusive works) with concentrations of PFOS+PFHxS above the adopted commercial/industrial land use screening criteria (on-base source areas).	The potential risks associated with direct contact with PFAS in soils are effectively managed by existing administrative controls (required for all excavation works on-base), OHS practices and personal protective equipment (PPE)
			Ecological: Flora - direct contact with, root uptake from PFAS in soil. Fauna - ingestion of PFAS in soil and ingestion of plants which may have taken up PFAS from the soil.	On-base flora and fauna.	Complete	Reported concentrations of PFOS in surface soils, have the potential to pose an unacceptable risk to ecological receptors due to direct and indirect contact.	Ongoing remediation to reduce PFAS levels at the base. Restricting access for fauna to PFAS impacted areas on base through engineering controls (i.e. fencing)
	PFAS in groundwater.	Groundwater transport in shallow aquifer.	Human health: Direct contact with groundwater (indoor and outdoor use); via extraction from bore, irrigation spear points (on and off-base).	Commercial/ Intrusive maintenance workers	Potentially complete	Potential for exposure to occur should indirect or direct contact with concentrations of PFAS in groundwater above relevant criteria.	On-base: Managed by provision of potable water and OHS practices.
				Residential	Potentially complete*	Potential for elevated exposure to occur under typical ² and upper ³ scenarios in Risk Zone A (refer to Appendix E). The severity is variable ¹ and dependant on the type and number of pathways	Off-base: Managed by provision of an alternative water supply and ongoing management via the NSW Government precautionary advice.
	PFAS in surface water.	Surface water transport; in drains and on ground surface on and off-base.	Ecological (on and off-base): Toxicity to flora and fauna from direct exposure to PFAS in surface water.	Ecosystem (on-base and off-base).	Complete	Reported concentrations of PFOS in surface water were above 90% species protection criteria in all waterways except Fullerton Cove. The Ecological Risk Assessment (ERA) (AECOM, 2018) noted that there was the potential for unacceptable risks to native flora and fauna associated with direct contact and/or consumption of PFAS impacted surface water	Ongoing management of surface water to reduce PFAS discharges from the base. The potential risks associated with direct contact with PFAS in sediment and surface water in on-base drains and water bodies are effectively managed by existing administrative controls (required for all maintenance works on-base), OHS practices, PPE and off-base via the NSW Government precautionary advice.
			Human Health: Direct contact with surface water (on-base commercial workers, off-base recreational)	Commercial / Recreational	Potentially complete*	Elevated concentrations of PFOS in surface water within on-base and off-base drains and surface water bodies	
	PFAS in sediment.	Dispersion via surface water or via drain maintenance activities.	Ecological (on and off-base): Direct contact of terrestrial and aquatic organisms to PFAS in sediment.	Ecosystem (on-base and off-base).	Complete	Reported concentrations of PFOS in sediment (on-base drains and Dawsons Drain/ Moors Drain) have the potential for unacceptable risks to aquatic organisms.	
			Human Health: Direct contact with PFAS in sediment for commercial workers (on base)	Commercial	Potentially complete	Elevated concentrations of PFOS in sediment within on-base drains and surface water bodies	

Primary Sources	Secondary Sources	Transport Mechanisms	Exposure Pathways	Exposed Population Characterisation / Receptor	Exposure pathway complete?	Risk	Risk Management
	PFAS in pore water in sediments.	Surface water transport; in un-lined drains and as surface flow on-base and off-base.	Ecological (on and off-base): Direct contact of terrestrial and aquatic organisms to PFAS in surface water.	Ecosystem (on-base and off-base).	Complete	Reported concentrations of PFOS in surface water were above 90% species protection criteria in all waterways except Fullerton Cove. The ERA (AECOM, 2018) noted that there was the potential for unacceptable risks to native flora and fauna associated with direct contact and/or consumption of PFAS impacted surface water	
	Home grown produce.	Uptake of PFAS in soil / water by biota	Human health: Consumption of home grown produce (including fruit and vegetables, chicken eggs).	Residential	Potentially complete*	Potential for elevated exposure to occur under typical² and upper³ scenarios in Risk Zones A, B, C and D when eating eggs from home grown backyard poultry that have consumed soil or plants that have accumulated PFAS from irrigation water. Potential for elevated exposure to occur when eating vegetables that have been in irrigated or flooded with water containing detectable PFAS concentrations, under: - typical² and upper³ scenarios in Risk Zone A (refer to Appendix E). - upper³ scenarios in Risk Zone B (refer to Appendix E). The severity is variable¹ and dependant on the type and number of pathways .	Ongoing management via the NSW Government precautionary advice.
	Aquatic biota.	Uptake of PFAS in sediment / water by aquatic biota	Human health: Ingestion of aquatic organisms (including fish and shellfish).	Residential/ Commercial fishers	Potentially complete*	Potential risk of harm to human health from consumption of high quantities of locally sourced finfish, including dusky flat head, luderick, silver biddy and mullet. Potential for elevated exposure to occur for commercial fishers under upper³ scenarios in marine environment.	Ongoing management via the NSW Government precautionary advice.

Notes:

* = Pathway considered to be potentially complete for this receptor; however, management measures are currently in place to reduce the potential for exposure via this pathway. Management measures include precautions to minimise exposure recommended by NSW Government (consistent with the 2017 HHRA), and provision of an alternative water supply to eligible stakeholders by Defence.

1. Combined with other exposure pathways, this has the potential to result in overall exceedances of the tolerable daily intake (TDI). Exceeding the TDI does not mean that health effects will occur, and there is currently no conclusive evidence that exposure to PFAS will lead to health effects in humans.

2. 'Typical' represents typical and average exposure scenarios for majority of the population.

3. 'Upper' represents receptors that undertake activities at a higher frequency or ingestion, therefore apply to a small percentage of the population.

10.0 Risk profile review

10.1 Risk assessment summary

The HHRA (AECOM, 2017b) and the ERA (AECOM, 2018) assessed the potential off-base human health and environmental risks resulting from exposure to base derived PFAS in soil, sediment, groundwater and / or surface water.

The data collected during OMP monitoring between January 2025 and December 2025 indicates that the risk profile to human health and ecological receptors within the Management Area as presented in the HHRA, ERA and the PMAP (Defence, 2023b) remains unchanged. This is based on the following assessment of OMP data, particularly with reference to the OMP trigger levels assessment outlined in **Section 8.0**.

It is noted that potential PFAS exposure for land users within the Williamstown Management Area via water use and locally sourced food consumption, is managed through NSW Government Precautionary Advice which currently remains in place.

10.2 Human Health Risk Assessment

The exposure pathways where potential risks were identified as elevated in the HHRA (AECOM, 2017b) were as follows:

- Drinking groundwater (including use in cooking) where the average PFAS concentration exceeds the drinking water guidelines (FSANZ, 2017)
- Incidental ingestion of groundwater when used indoors for showering or bathing or food preparation
- Incidental ingestion of groundwater when used outdoors (including filling swimming pools and children's wading pools, sprinkler play and domestic irrigation)
- Incidental ingestion of surface water during recreational activities (including swimming in creeks and/or drains)
- Eating home grown vegetables
- Eating eggs from backyard poultry
- Eating home grown red meat
- Drinking milk from home grown cattle or using it in cooking
- Eating high quantities of locally sourced finfish.

The current data set collected under the OMP does not indicate that there is a change in the identified HHRA exposure pathways described above.

10.3 Ecological Risk Assessment

The exposure pathways where potential risks were identified as elevated in the ERA (AECOM, 2018) were as follows

- Ingestion of PFAS impacted soil, sediment or surface water by ecological receptors.
- Ingestion of organisms that have been exposed to PFAS where bioaccumulation is occurring, including aquatic and terrestrial organisms.

The current data set collected under the OMP does not indicate that there is a change in the identified ERA exposure pathways described above.

11.0 Conclusions

Groundwater, surface water and sediment sampling was completed as part of the OMP between January 2025 and December 2025. The following conclusions are based on the data collected during the monitoring period.

PFAS plume characteristics

Overall, the concentrations of PFAS in groundwater were generally similar to previous results. In several upper and mid-plume locations on-base 'decreasing' trends were identified, indicating that targeted treatment of on-base source areas has and continues to remove PFAS mass from the environment and mitigate replenishment of PFAS plumes.

At some monitoring locations downgradient of the plume fronts new maximum concentrations of PFAS were identified suggesting the cores of the plumes continue to migrate away from on-base source areas. This was most visible in monitoring wells located between Cabbage Tree Road and Fullerton Cove (to the south of the base) where first-time detections of PFAS may be indicative of increased groundwater/surface water interaction occurring along Dawsons Drain, contributing to higher PFAS concentrations in that area.

To the east of the base towards Salt Ash, the inferred extent of the plume has been refined based on the low level PFAS analysis and continues to predominately fall within the boundary of the Secondary Management Zone. An increasing trend of PFAS in one deep monitoring well to the west of the base (where concentrations have steadily increased by an order of magnitude since 2019) will continue to be monitored to assess whether it is indicative of a change to the extent of the western plume.

Elsewhere across the Williamstown Management Area, PFAS concentrations and the shape of the groundwater plume in the Primary and Secondary Management Zones were generally stable.

The overall extent of the off-base plume remains relatively consistent with the extents identified in the DSI (AECOM, 2017a).

Conceptual Site Model and Risk Summary

The CSM was reviewed, and no changes were identified to PFAS sources, pathways or receptors at the base and off-base Management Area.

While there have been localised changes in PFAS concentrations during the monitoring period, the risks profiles associated with exposure to PFAS in groundwater, surface water and sediment, and as described in the HHRA (AECOM, 2017b), have not changed and no review of exposure assumptions is required.

The potential PFAS exposure of land users off-base, within the Williamstown Management Area, regarding water use and locally sourced food consumption is currently managed through NSW Government Precautionary Advice and remains in place.

Remediation progress

- The three water treatment plants on-base removed approximately 4.1 kg of PFAS from the environment (groundwater and surface water) during this monitoring period
- The decreasing trends in concentrations in selected wells in the northern portion of the Western Region is likely to be attributable to the soil remediation and groundwater treatment at the FFTA
- The FFTA WPT in the Western Region ceased operation on 14 November 2025. The plant was upgraded and the extraction was moved to the southern boundary within the Western Region to target the PFAS plume that originated from the FFTA
- Defence is also planning to implement additional management actions to target the central plume, and potentially upgrade the Moors Drain water treatment plant, it is estimated that these proposed additional works (including the new location of the Western Region extraction) will reduce PFAS flux entering the environment by around 30 kg per year
- Investigations at the former and current fire station (Facility 165) and the Eastern Region completed, the findings of which will be used to inform remedial planning in 2026

- The investigations for the permeable barrier trial commenced along the southern edge of Lake Cochran, which will inform future remedial planning in 2026
- The investigations on Dawsons Drain in the Western Region commenced, looking at quantifying the contribution of PFAS from Lake Cochran to Dawsons Drain
- Whilst remediation progress continues across the base, the management of risks to PFAS continues to be undertaken in accordance with the actions outlined in the PMAP.

While PFAS from the central plume continues to discharge into Leary's Drain, the proposed Central Region pump and treat system (scheduled to be installed in late 2026) at Cabbage Tree Road aims to reduce the PFAS mass entering the receiving environment at Fullerton Cove. Similarly, while new maximum and/or increasing concentrations of PFAS have been identified in groundwater in the Western Region, the newly commissioned Western Region pump and treat system aims to minimise the PFAS mass migrating beyond that base boundary.

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Appendix A

Figures

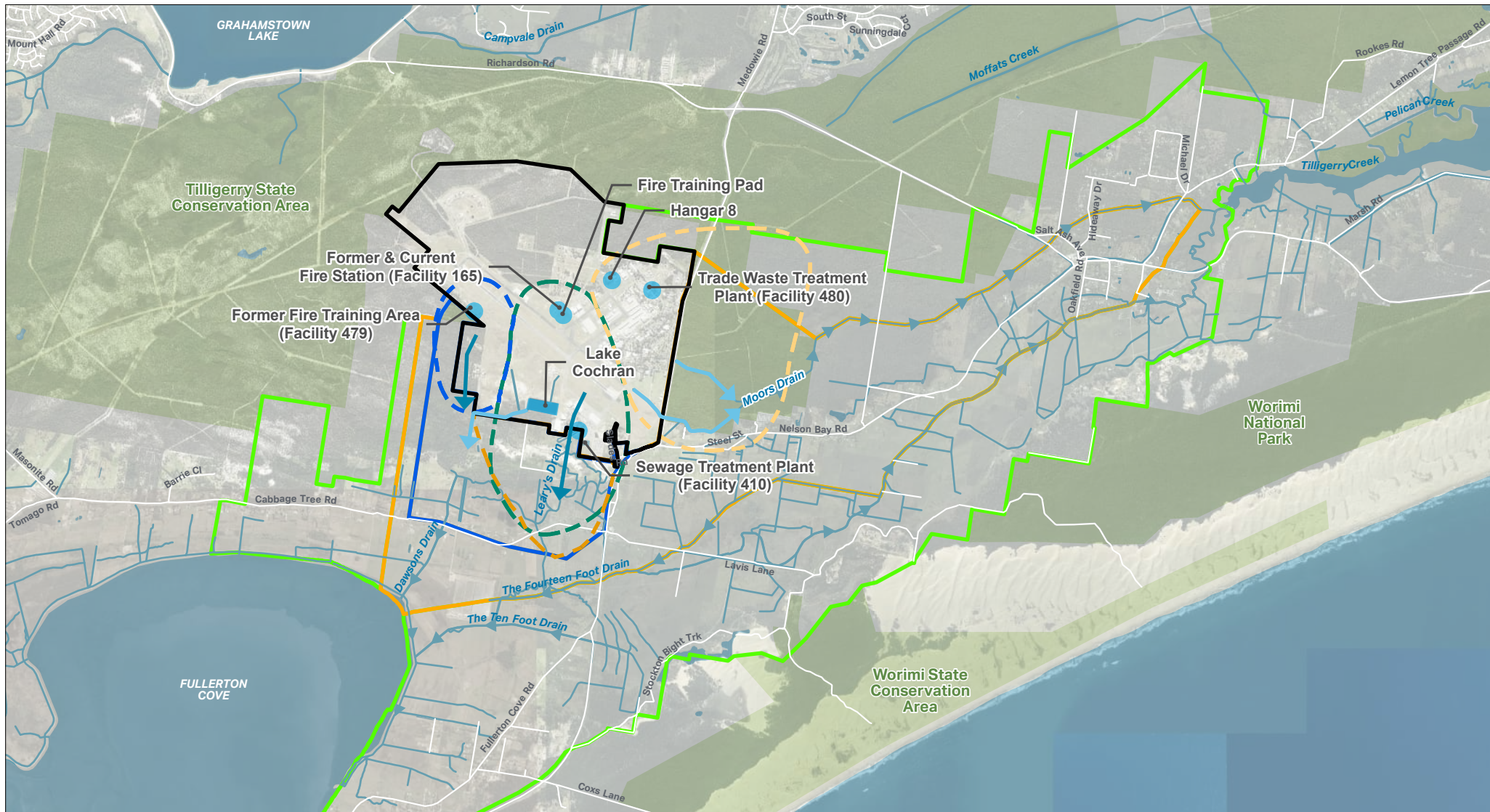


FIGURE F1: SITE LOCATION AND MANAGEMENT AREA

Legend

- | | | |
|-----------------------------|----------------|---------------------------------------|
| Active Base Boundary | Central Region | PFAS Source Area (PMAP, Defence 2023) |
| Primary Management Zone | Eastern Region | Watercourse direction |
| Secondary Management Zone | Western Region | Key Groundwater Migration Pathway |
| Broader Management Zone | Southern Area | Key Surface Water Migration Pathway |
| National Parks and Reserves | Watercourse | |

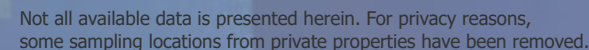


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Legend

- Waterway



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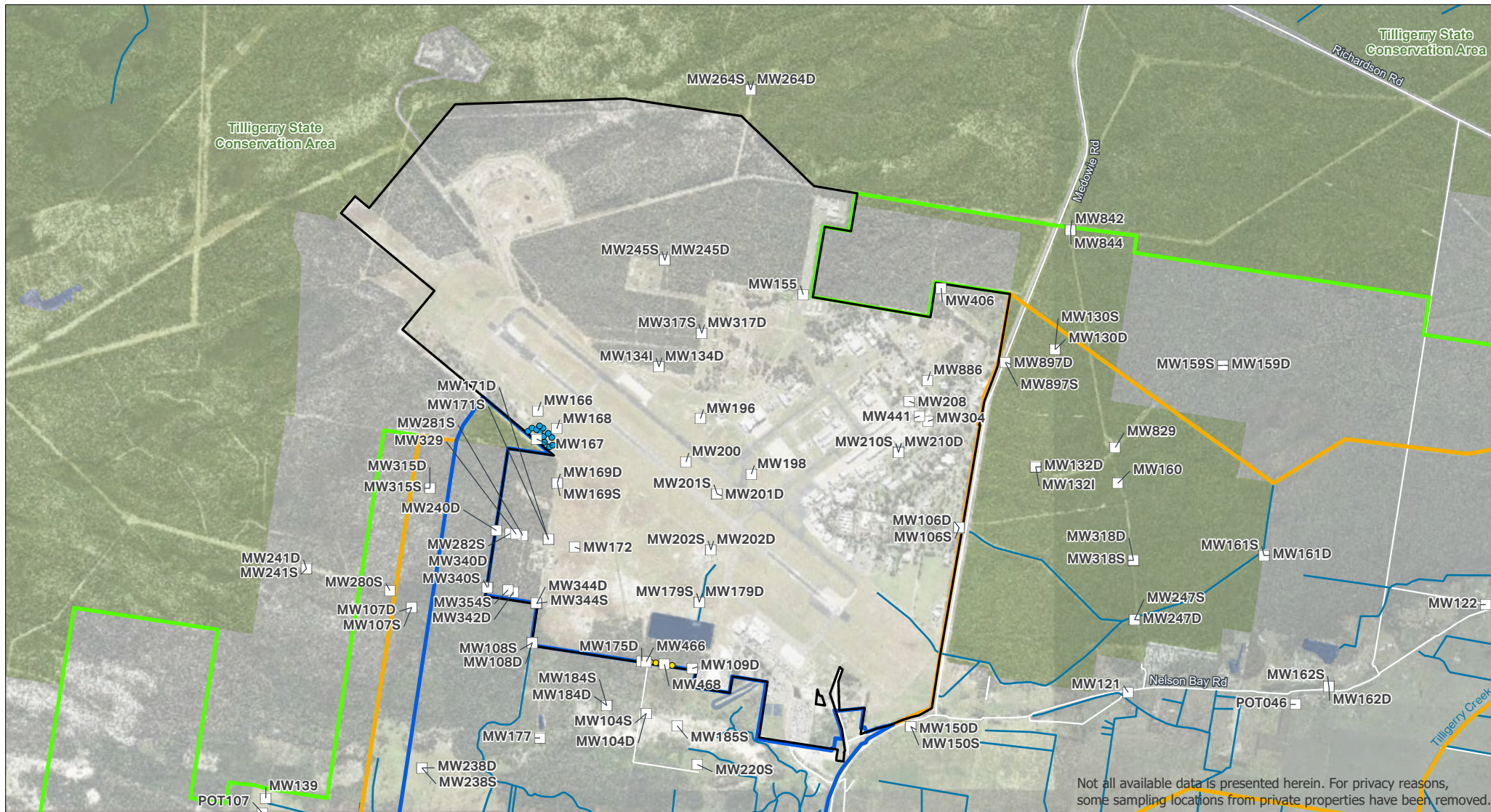


FIGURE F2-2: GROUNDWATER SAMPLING LOCATIONS - BASE AND SURROUNDS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- Groundwater Sampling Location
- Extraction Wells for Former Fire Training Area Water Treatment
- Extraction Wells for Southern Area Water Treatment



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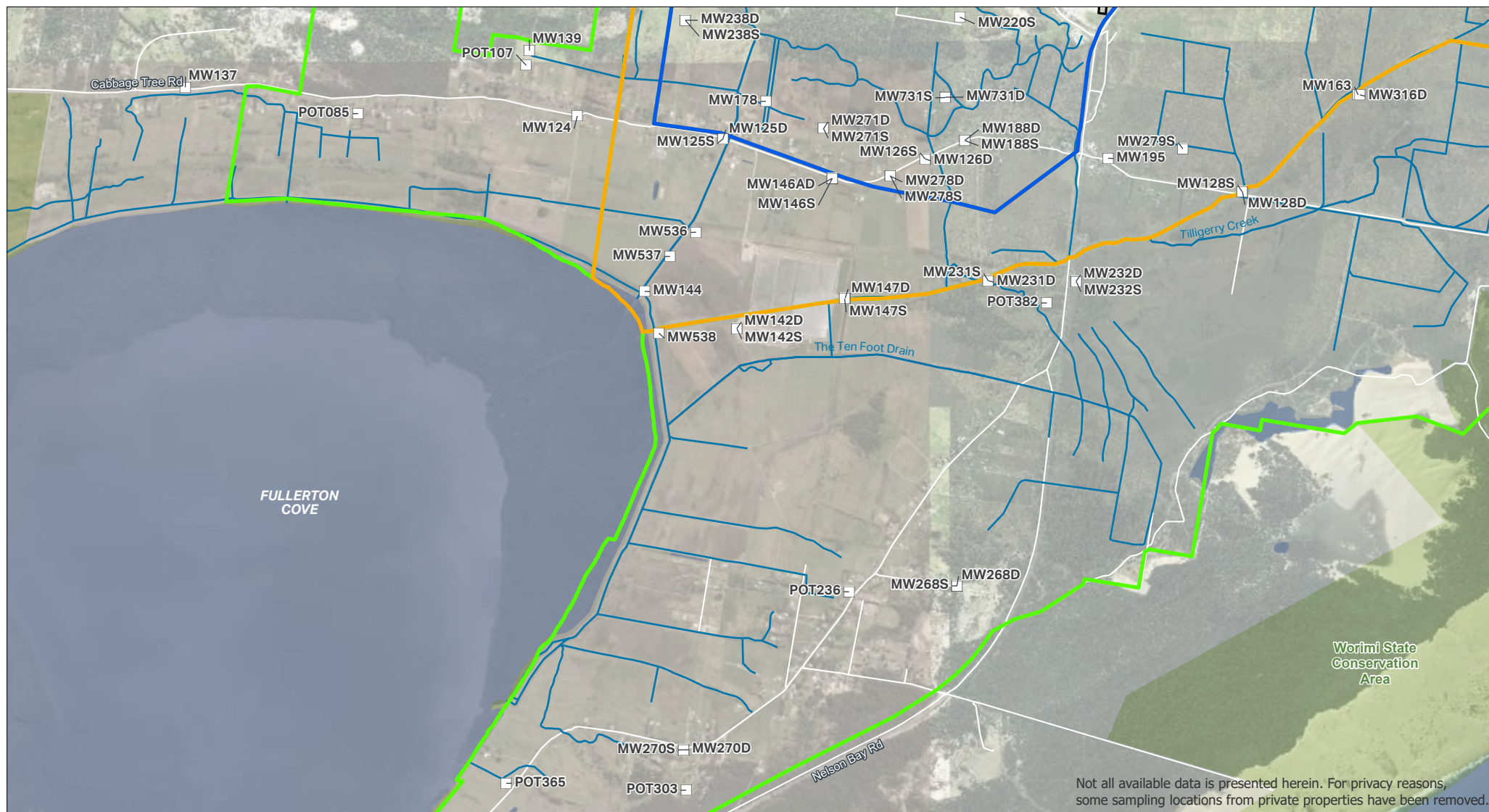


FIGURE F2-3: GROUNDWATER SAMPLING LOCATIONS - SOUTH

Legend

- | | |
|---------------------------|--|
| Active Base Boundary | Waterway |
| Primary Management Zone | Groundwater Sampling Location |
| Secondary Management Zone | Extraction Wells for Former Fire Training Area Water Treatment |
| Broader Management Zone | Extraction Wells for Southern Area Water Treatment |
| NPWS Reserve | |



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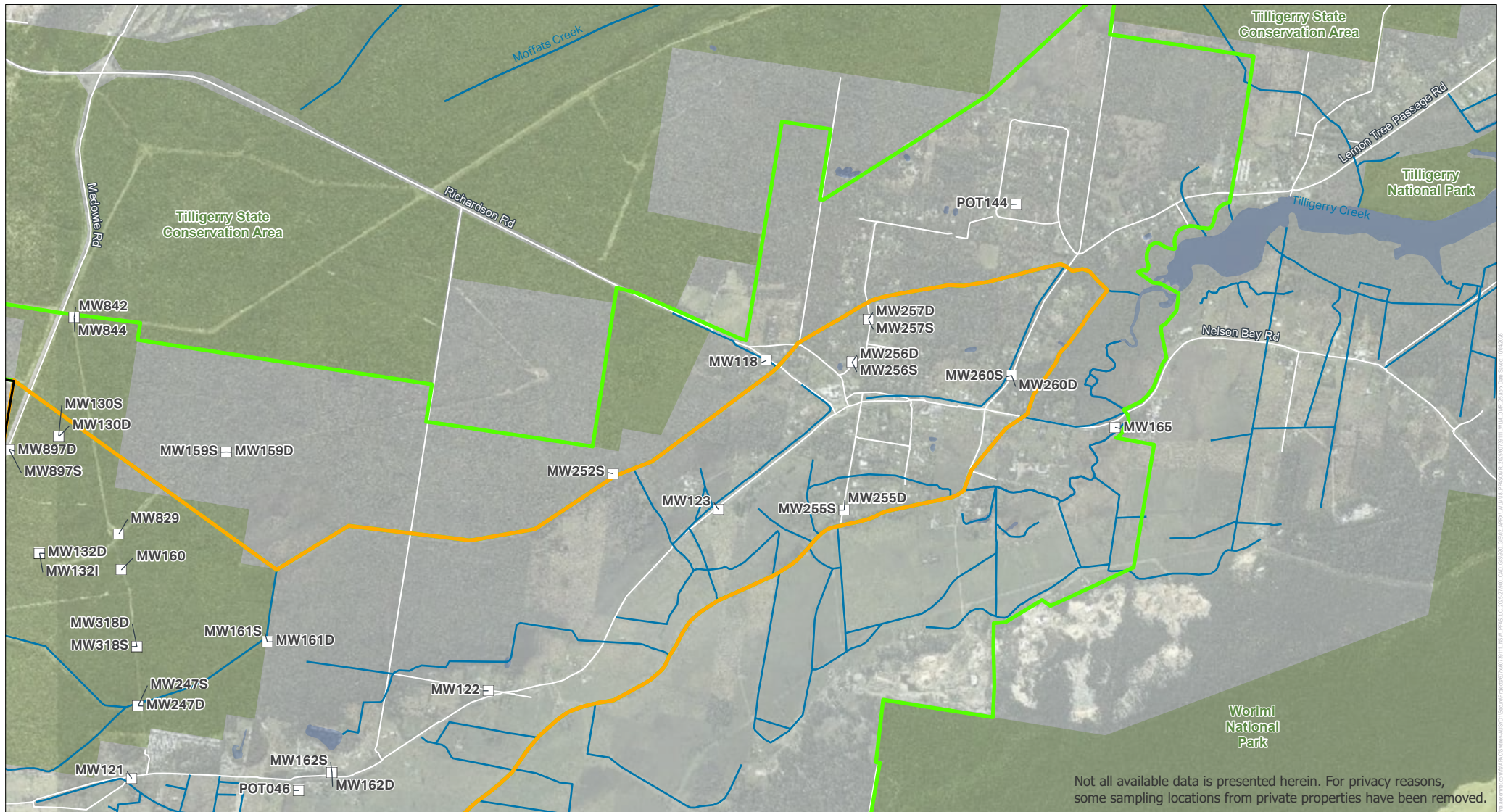


FIGURE F2-4: GROUNDWATER SAMPLING LOCATIONS - EAST

Legend

- | | |
|---|--|
| Active Base Boundary | — Waterway |
| Primary Management Zone | Groundwater Sampling Location |
| Secondary Management Zone | ● Extraction Wells for Former Fire Training Area Water Treatment |
| Broader Management Zone | ● Extraction Wells for Southern Area Water Treatment |
| NPWS Reserve | |



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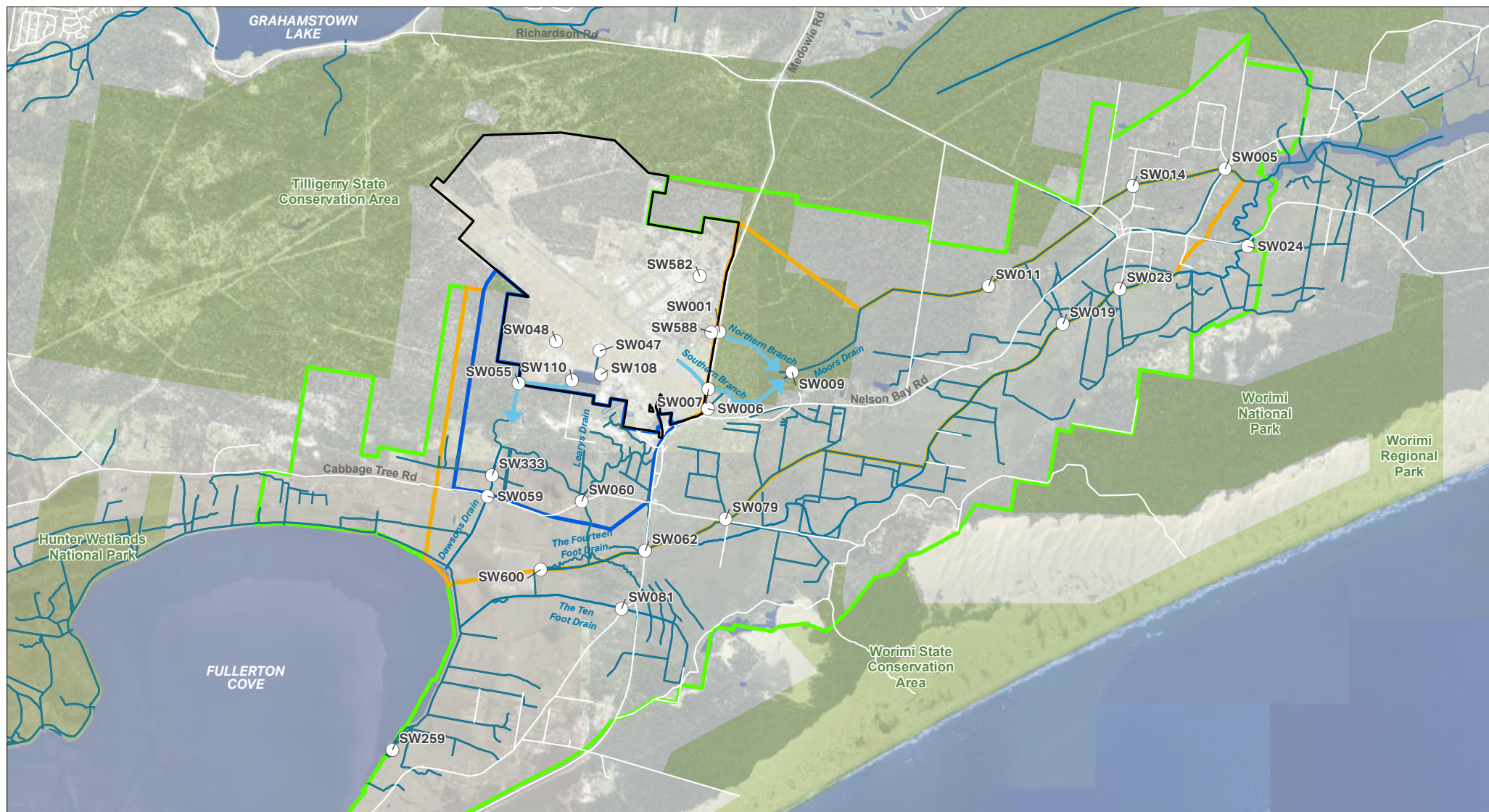


FIGURE F3: SURFACE WATER SAMPLING LOCATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- National Parks and Reserves
- Waterway
- ➔ Surface Water Drainage Pathways
- Surface Water Sampling Location



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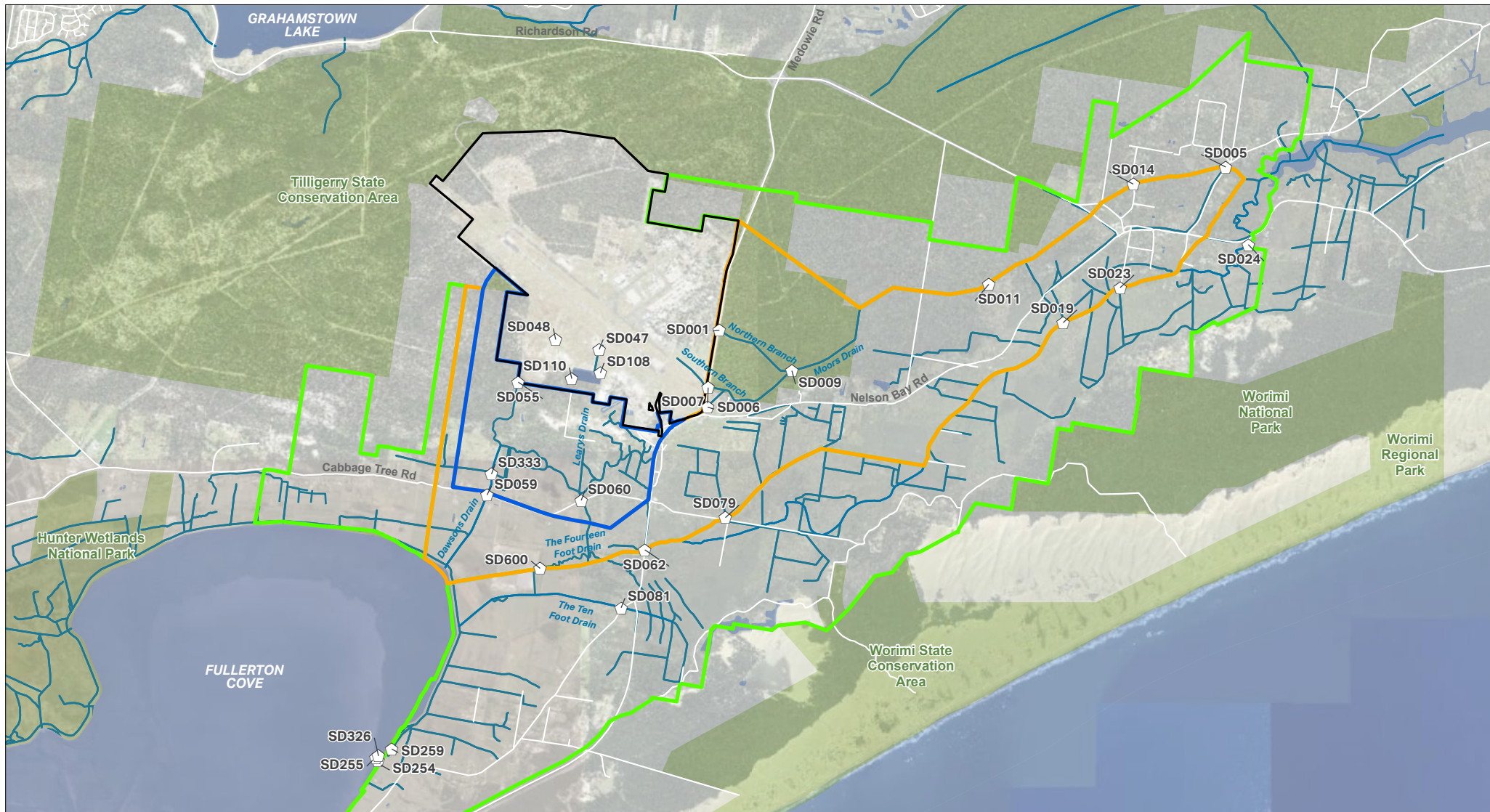


FIGURE F4: SEDIMENT SAMPLING LOCATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway
- ◻ Sediment Sampling Location



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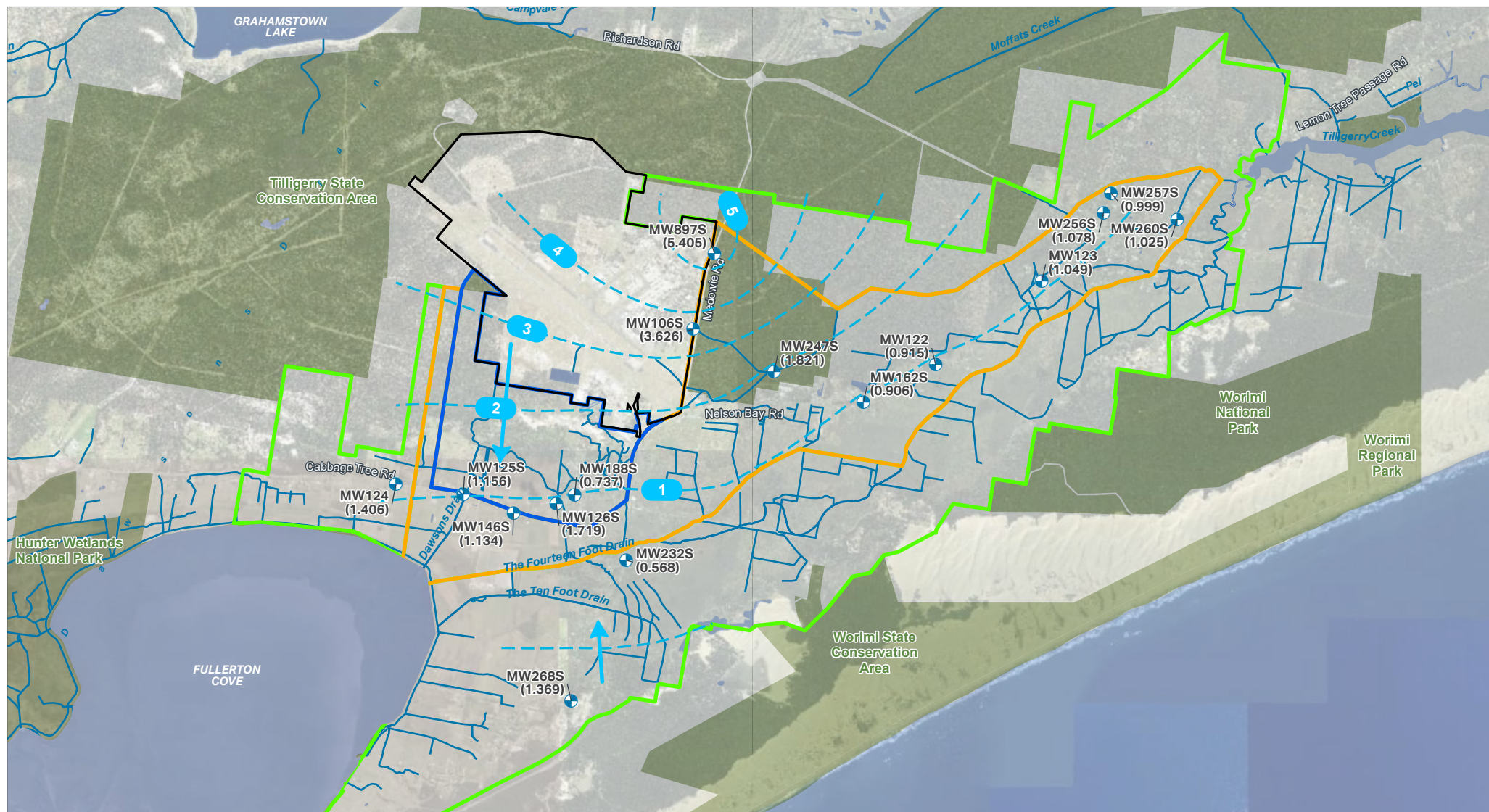


FIGURE F5: SHALLOW GROUNDWATER ELEVATION PLAN - APRIL 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- Groundwater Elevation Contours (Shallow Wells; m AHD)
- ➔ Inferred Groundwater Flow Direction
- Groundwater Location (gauged)



0 1 2 km

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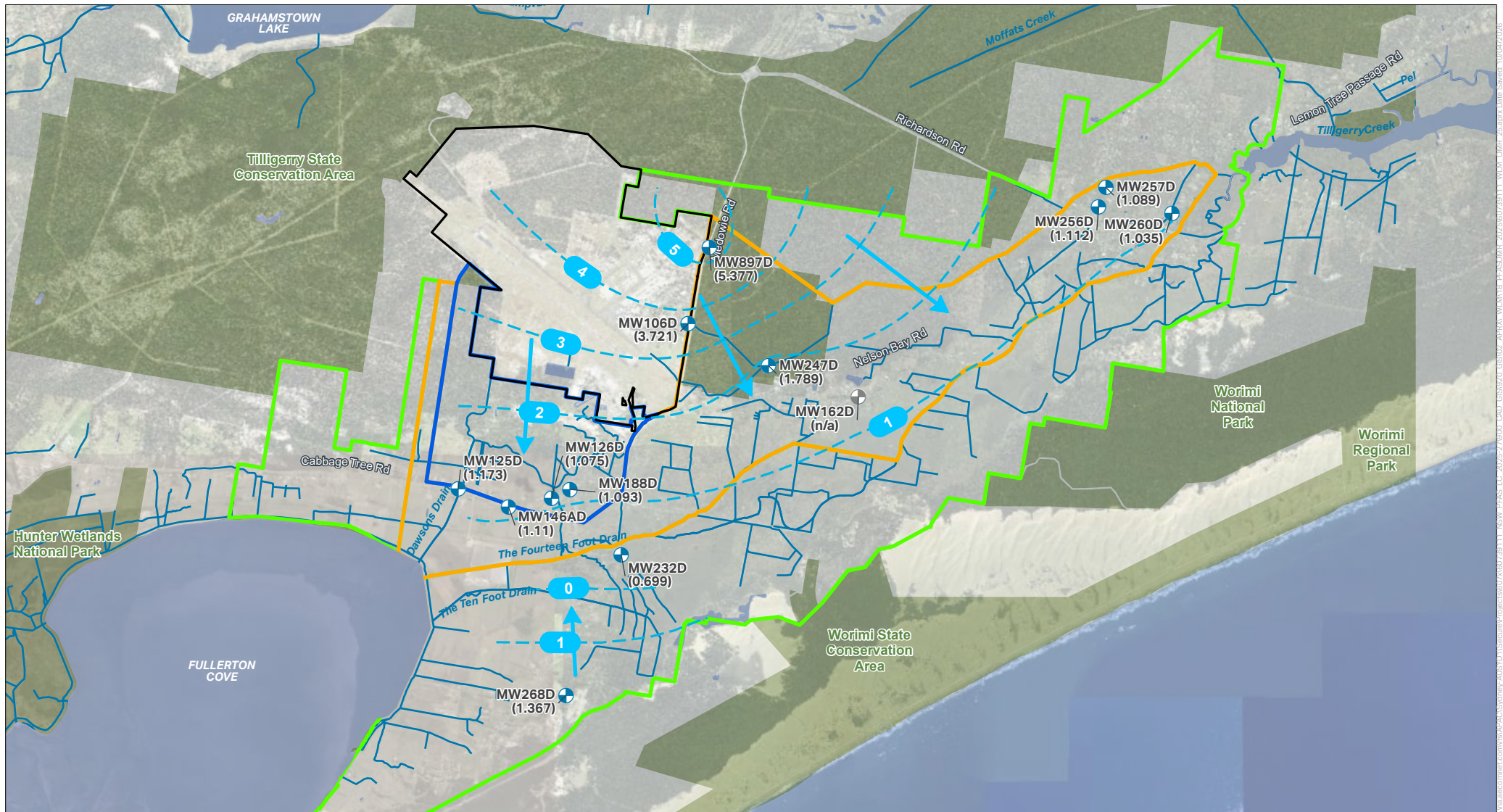


FIGURE F6: DEEP GROUNDWATER ELEVATION PLAN - APRIL 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- NPWS Reserve
- Waterway
- Groundwater Location (gauged)
- Groundwater Location (not gauged)
- ➔ Inferred Groundwater Flow Direction
- Groundwater Elevation Contours (Deep Wells; m AHD)



0 1 2 km

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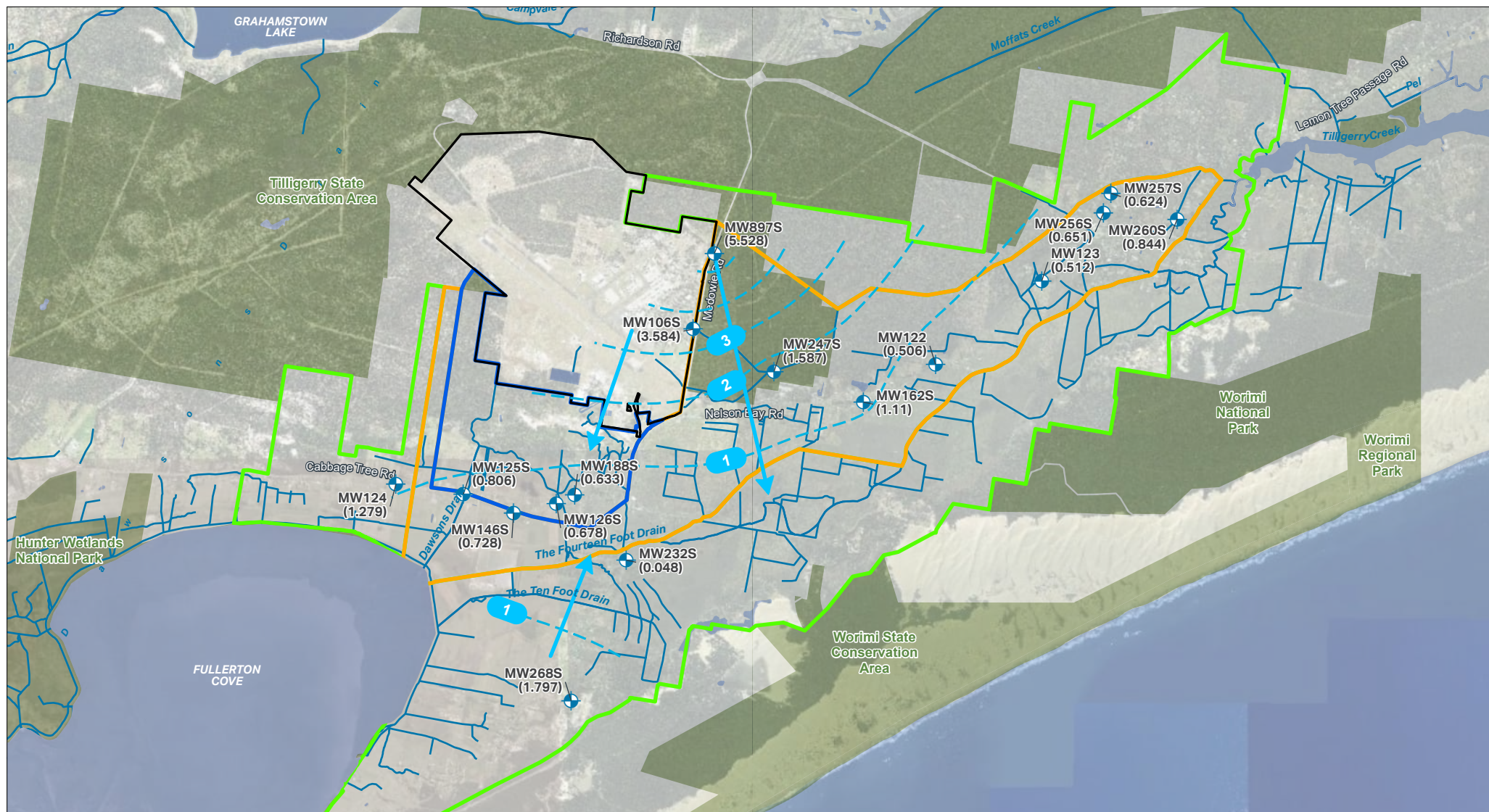


FIGURE F7: SHALLOW GROUNDWATER ELEVATION PLAN - OCTOBER 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- ➔ Inferred Groundwater Flow Direction
- Groundwater Elevation Contours (Shallow Wells; m AHD)
- ⬮ Groundwater Location (gauged)



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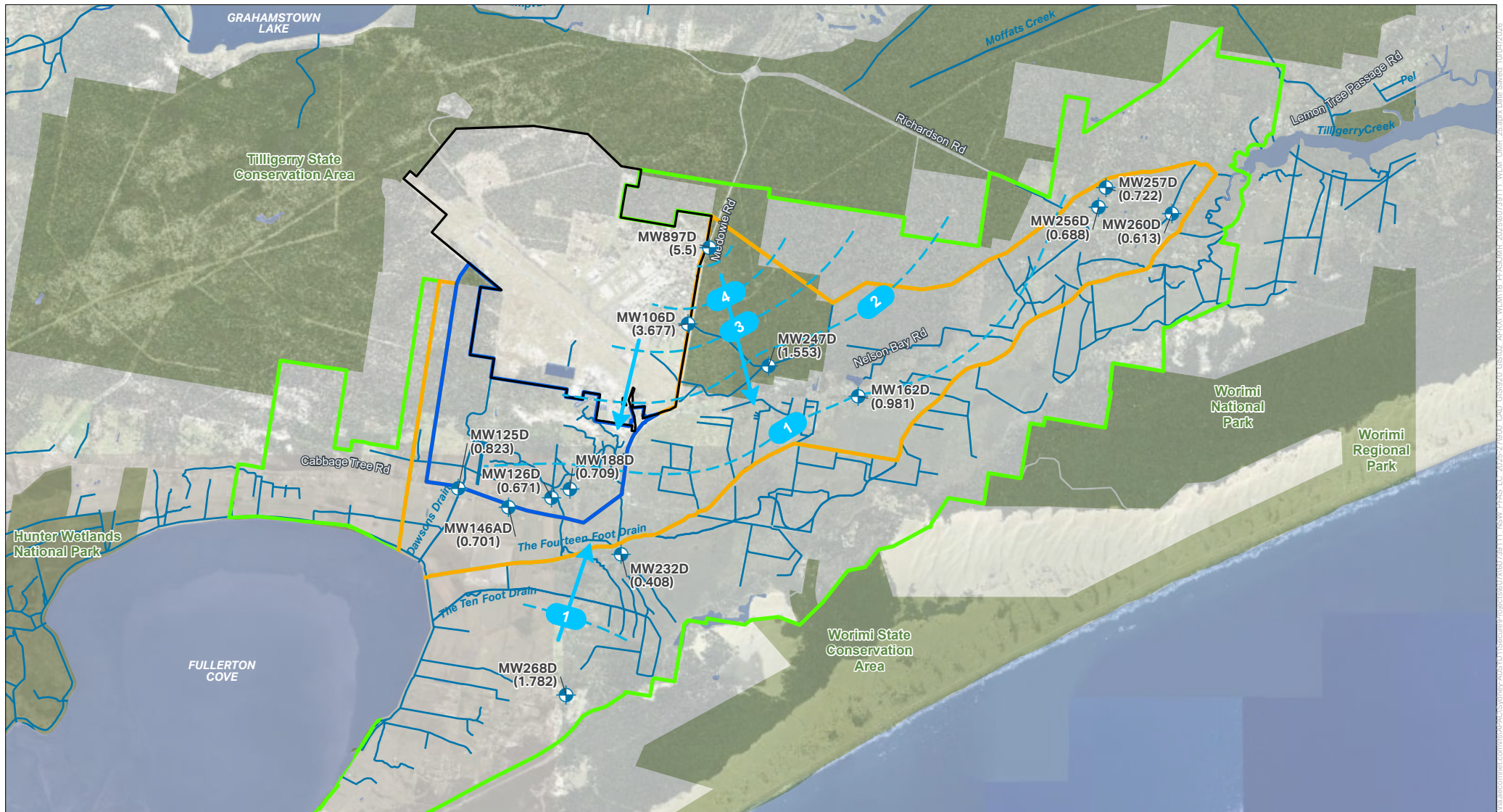


FIGURE F8: DEEP GROUNDWATER ELEVATION PLAN - OCTOBER 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- ➔ Inferred Groundwater Flow Direction
- Groundwater Elevation Contours (Deep Wells; m AHD)
- Groundwater Location (gauged)



0 1 2 km

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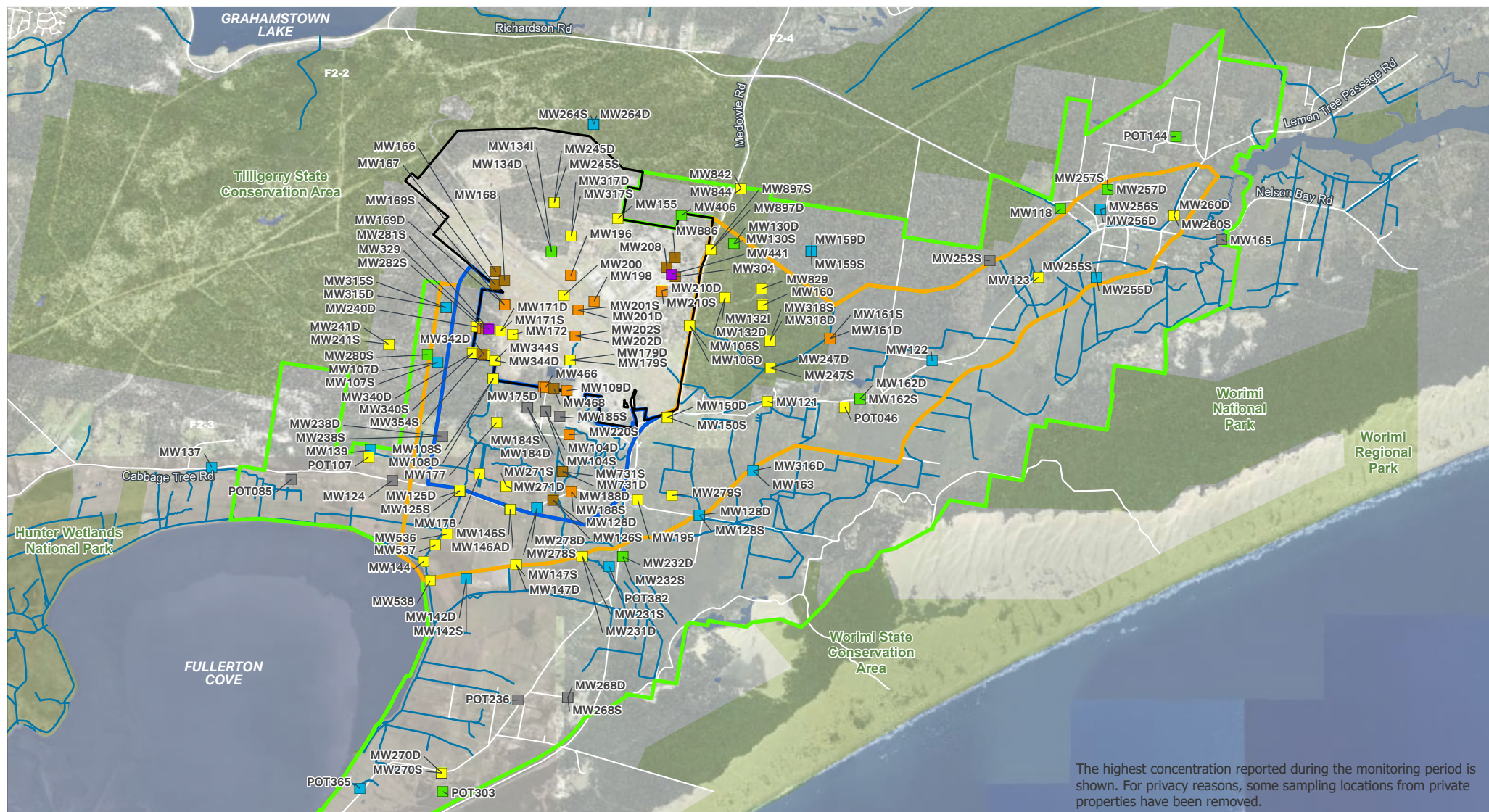


FIGURE F9: GROUNDWATER ANALYTICAL RESULTS - PFOS - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- National Parks and Reserves
- Waterway

PFOS concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 1 - 10
- > 0.008 - 1
- Limit of Reporting - 0.008
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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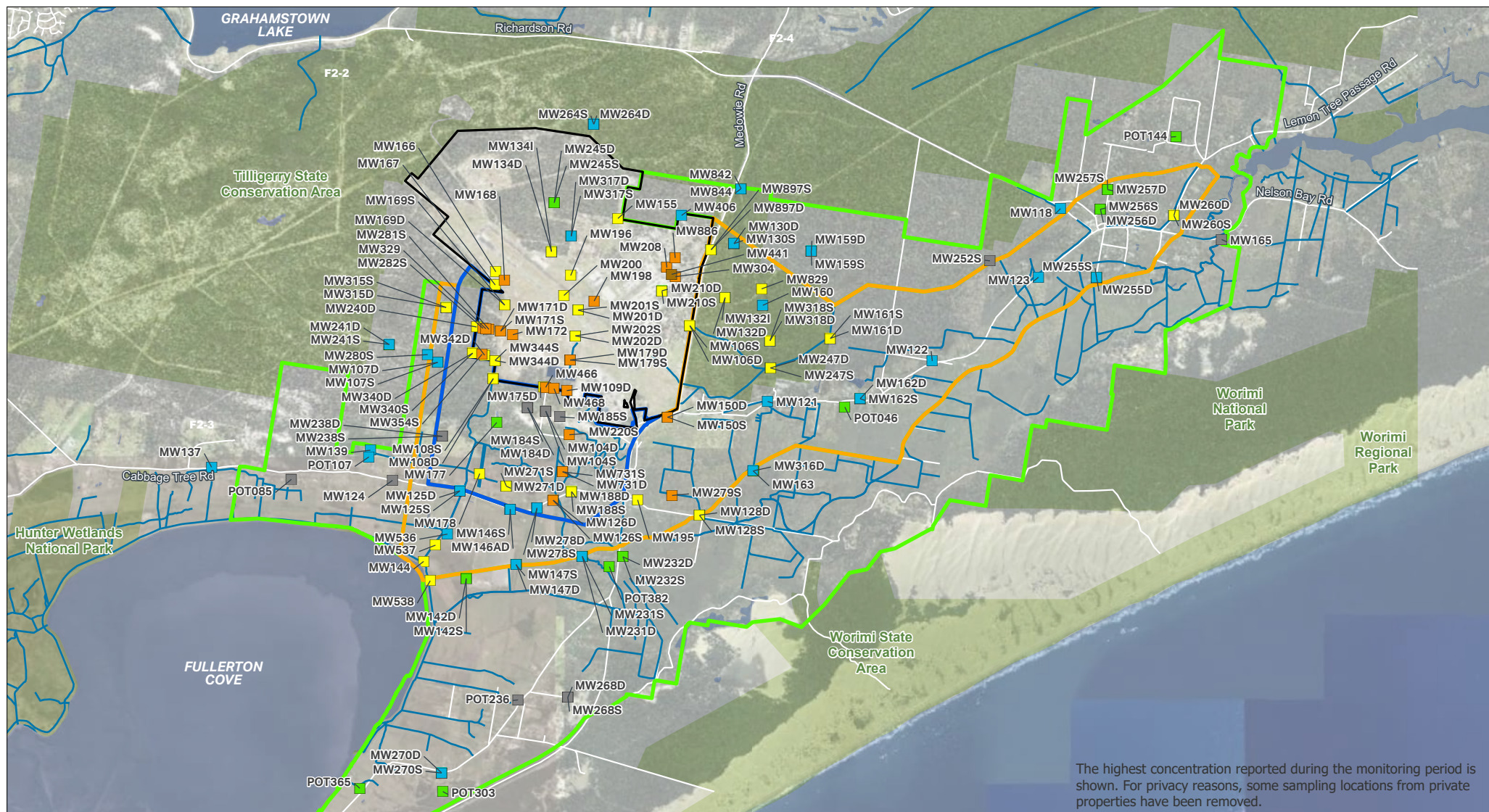


FIGURE F10: GROUNDWATER ANALYTICAL RESULTS - PFHXS - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway

PFHxS concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 1 - 10
- > 0.03 - 1
- Limit of Reporting - 0.03
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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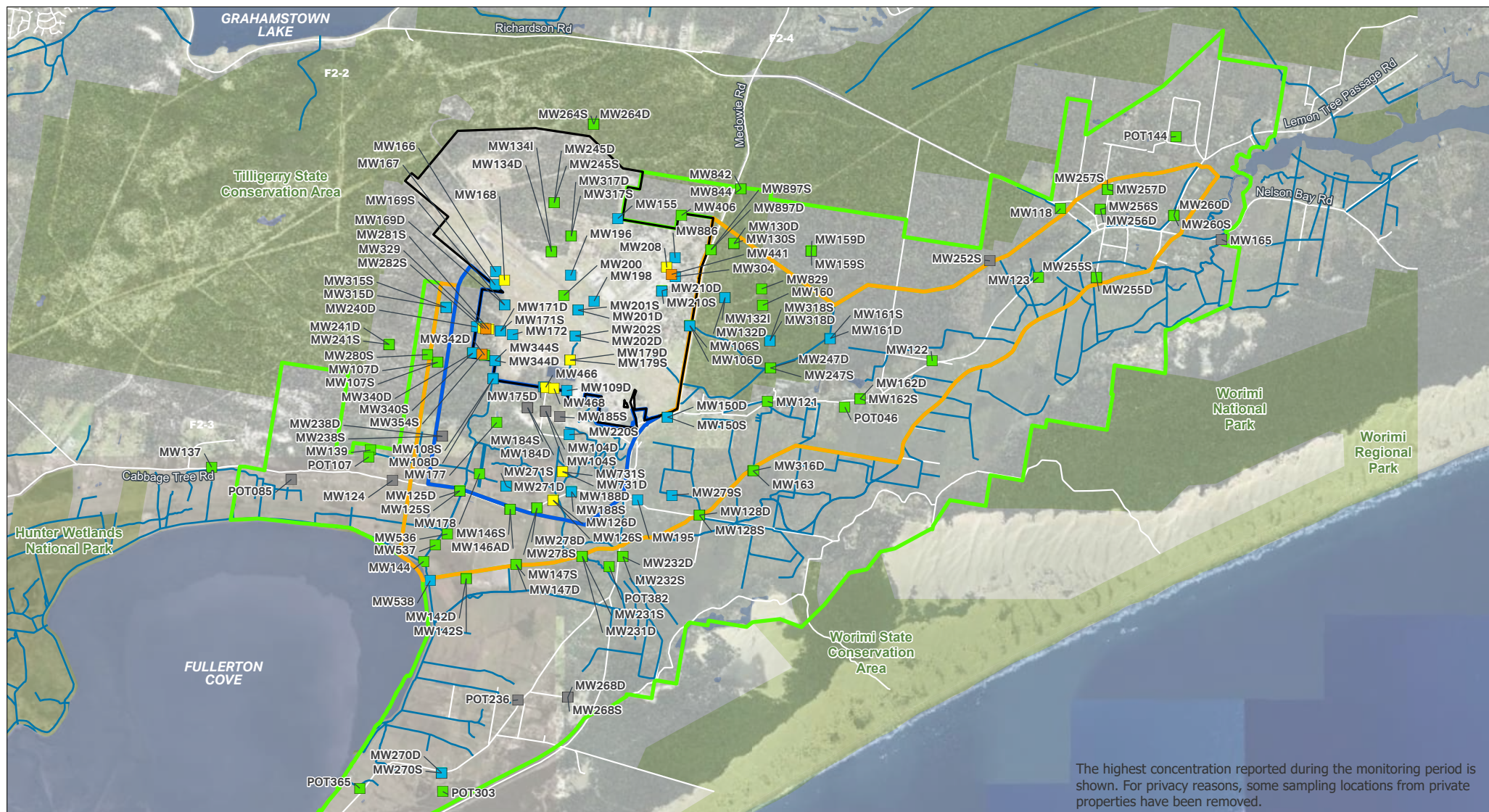


FIGURE F11: GROUNDWATER ANALYTICAL RESULTS - PFOA - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- National Parks and Reserves
- Waterway

PFOA concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 1 - 10
- > 0.2 - 1
- Limit of Reporting - 0.2
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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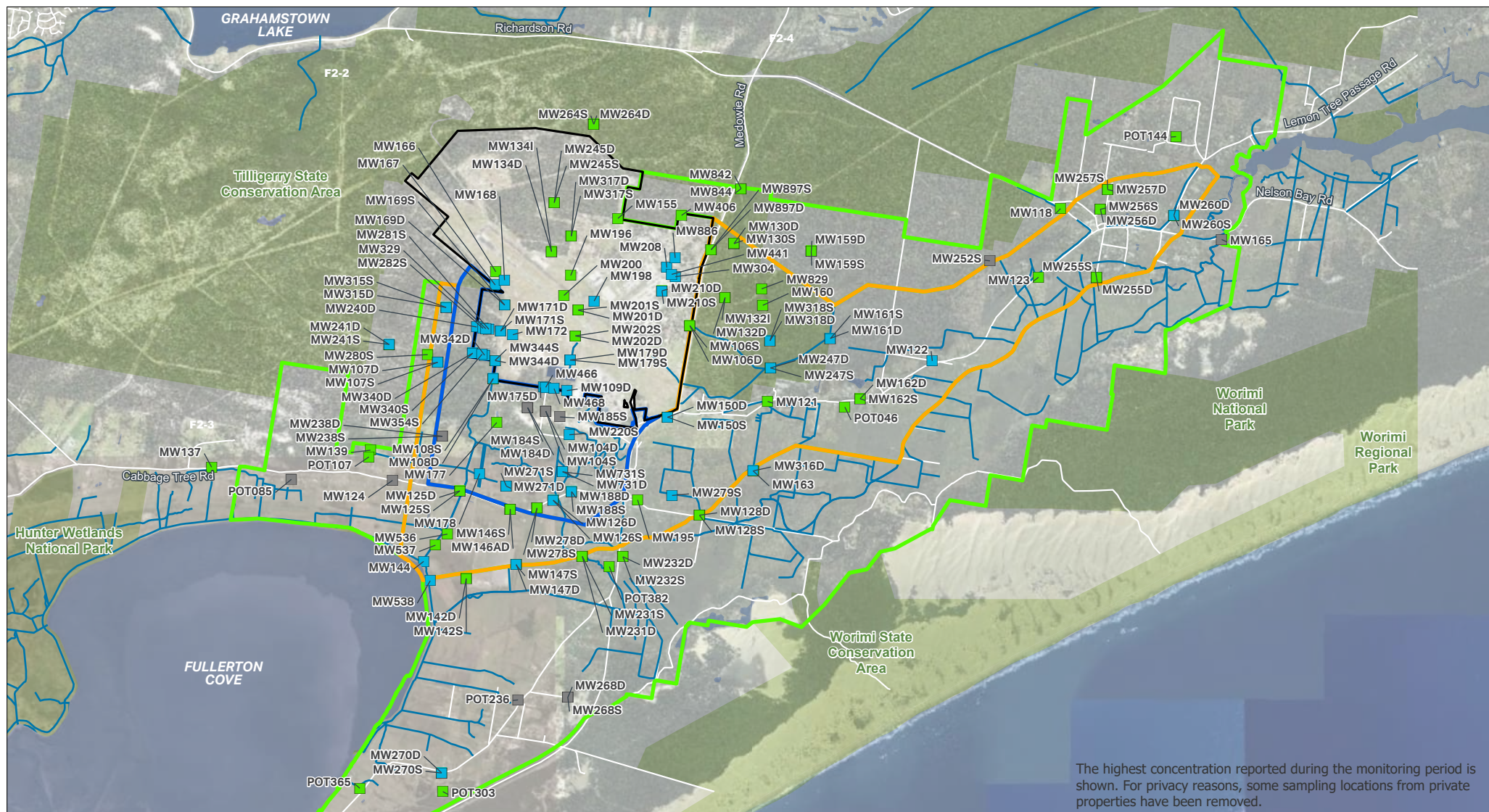


FIGURE F12: GROUNDWATER ANALYTICAL RESULTS - PFBS - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- National Parks and Reserves
- Waterway

PFBS concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 5 - 10
- > 1 - 5
- Limit of Reporting - 1
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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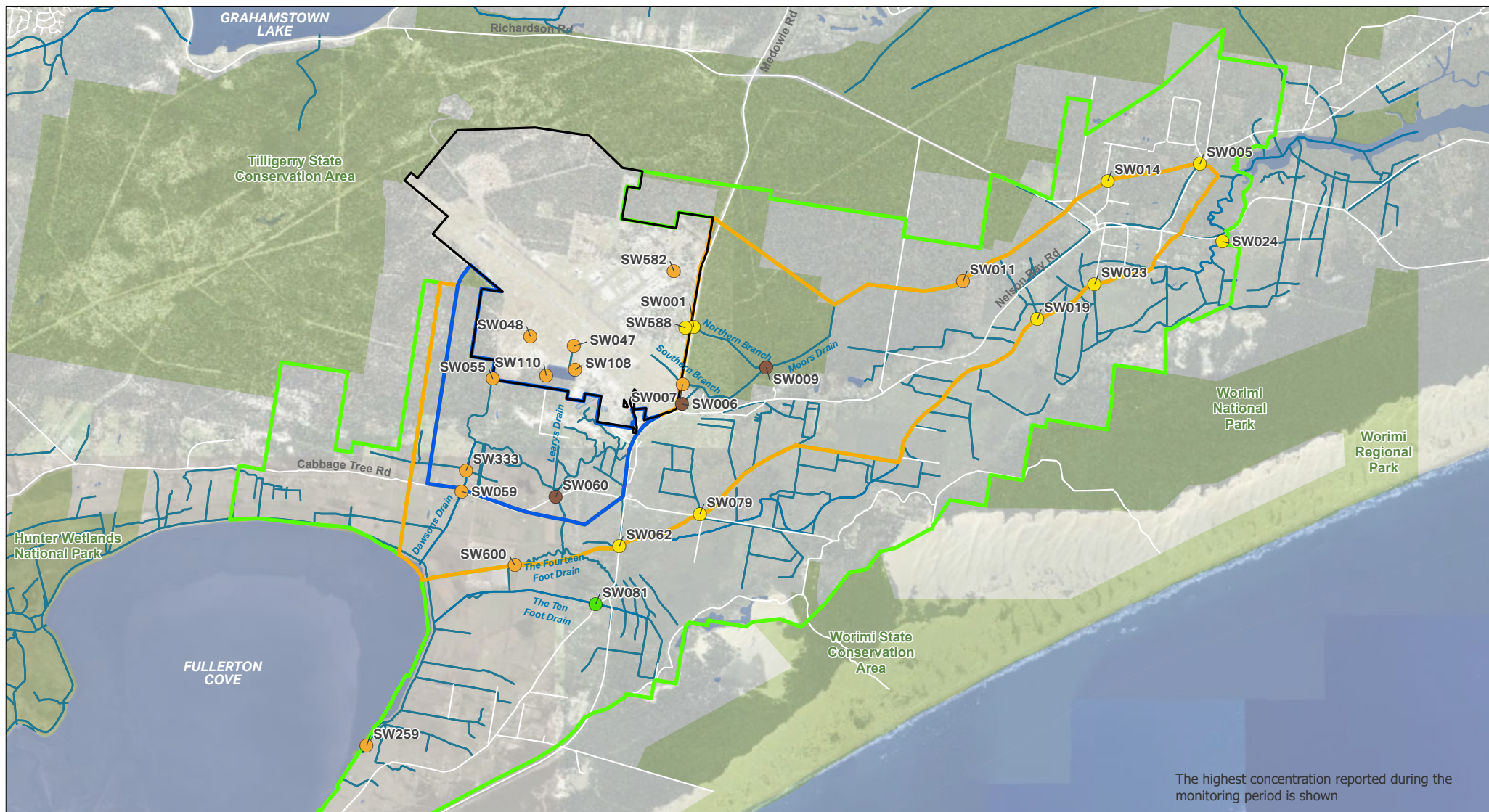


FIGURE F13: SURFACE WATER ANALYTICAL RESULTS - PFOS+PFHXS - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway

PFOS+PFHXS concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 2 - 10
- > 0.1 - 2
- Limit of Reporting - 0.1
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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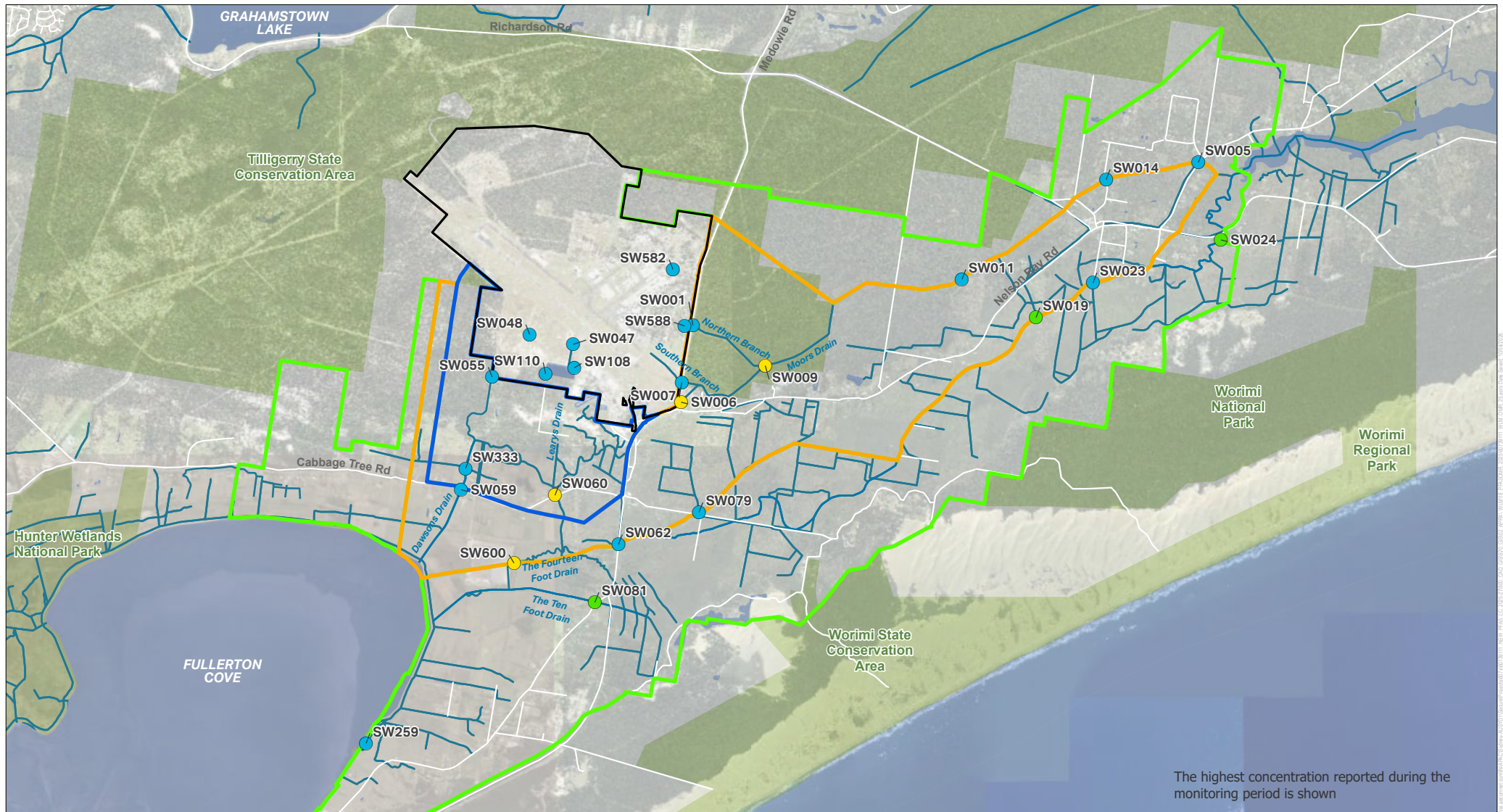


FIGURE F14: SURFACE WATER ANALYTICAL RESULTS - PFOA - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- National Parks and Reserves
- Waterway

PFOA concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 1 - 10
- > 0.2 - 1
- Limit of Reporting - 0.2
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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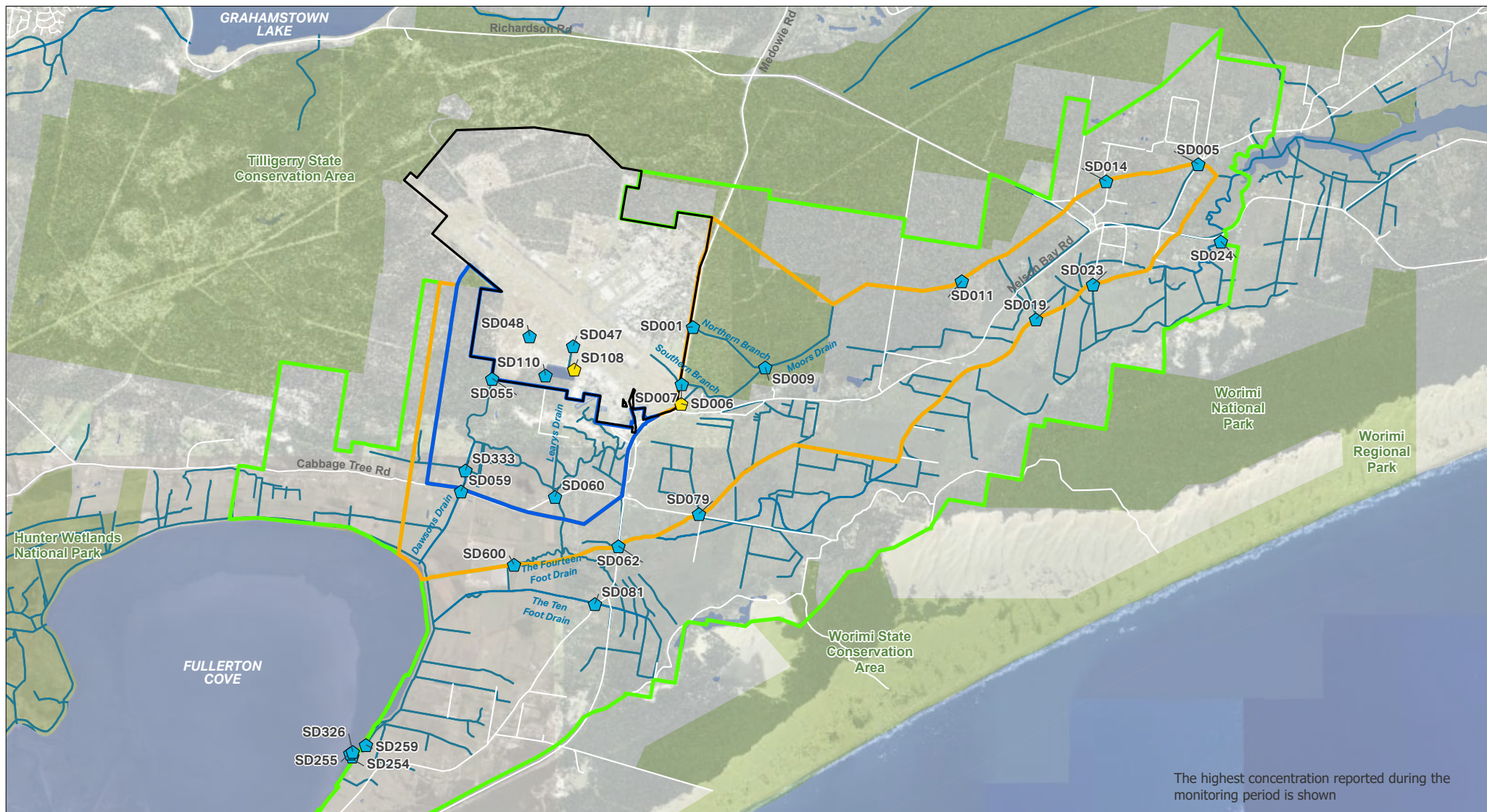


FIGURE F15: SEDIMENT ANALYTICAL RESULTS - PFOS+PFHxS - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway

PFOS+PFHxS concentration ranges (mg/kg)

- > 50
- > 10 - 50
- > 2 - 10
- > 0.2 - 2
- Limit of Reporting - 0.2
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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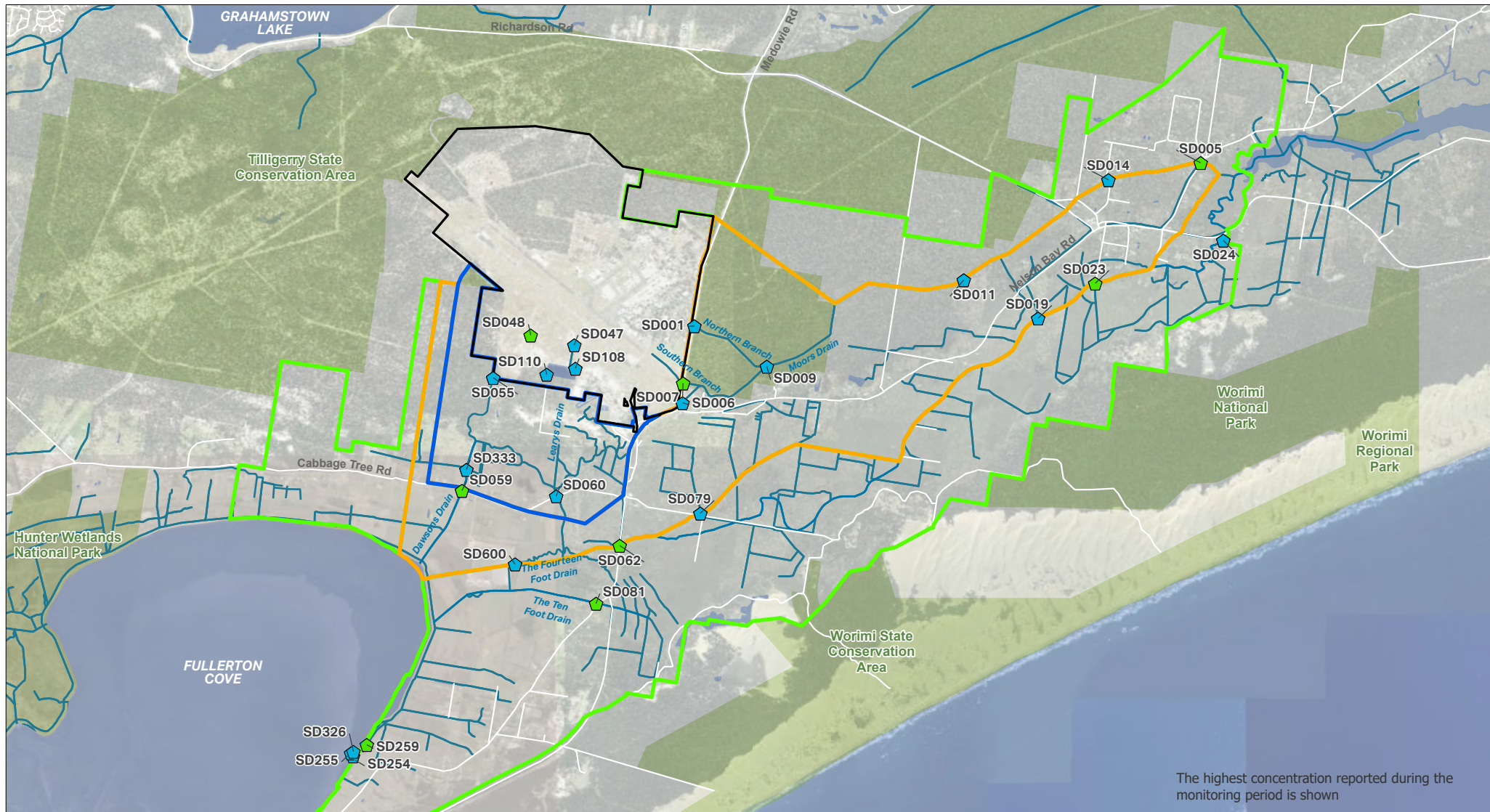


FIGURE F16: SEDIMENT ANALYTICAL RESULTS - PFOA - 2025

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway

PFOA concentration ranges (mg/kg)

- ◆ > 50
- ◆ > 10 - 50
- ◆ > 2 - 10
- ◆ > 0.2 - 2
- ◆ Limit of Reporting - 0.2
- ◆ < Limit of Reporting
- ◆ Not Sampled/Accessed or in Scope



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FIGURE F17: GROUNDWATER ANALYTICAL RESULT DEVIATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- Waterway
- NPWS Reserve
- No Deviations in the Monitoring Period
- First Time Detection of PFAS
- New exceedance of Human Health and/or Ecological Screening Criteria for PFOS, PFHxS, PFOA and/or PFPS
- Significant* new maximum concentration of PFAS

*Significant is considered to be one order of magnitude higher or greater than historical ranges.

*Denotes sampling location with deviation from historical data



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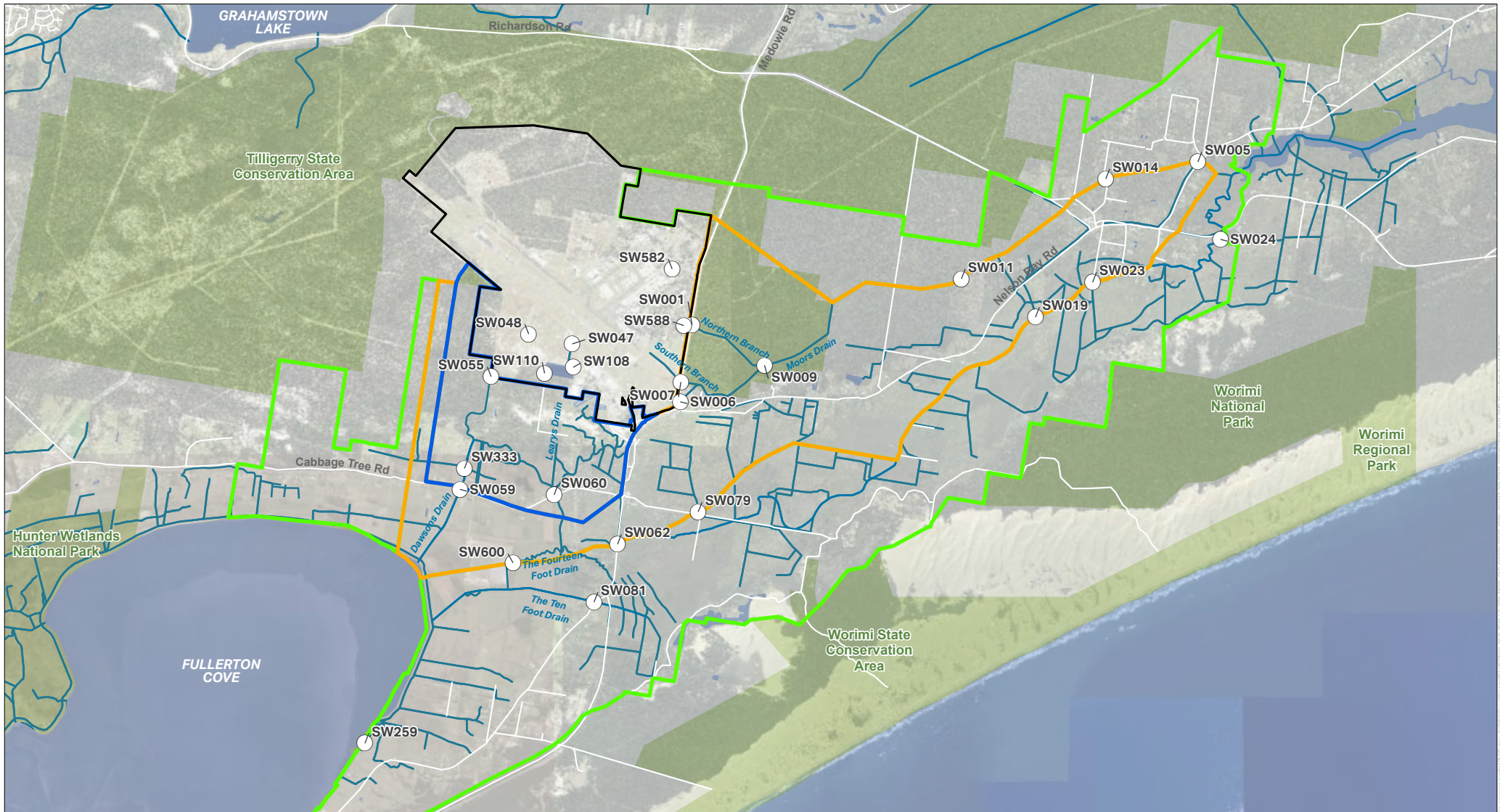


FIGURE F18: SURFACE WATER ANALYTICAL RESULT DEVIATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway
- No deviations in the Monitoring period



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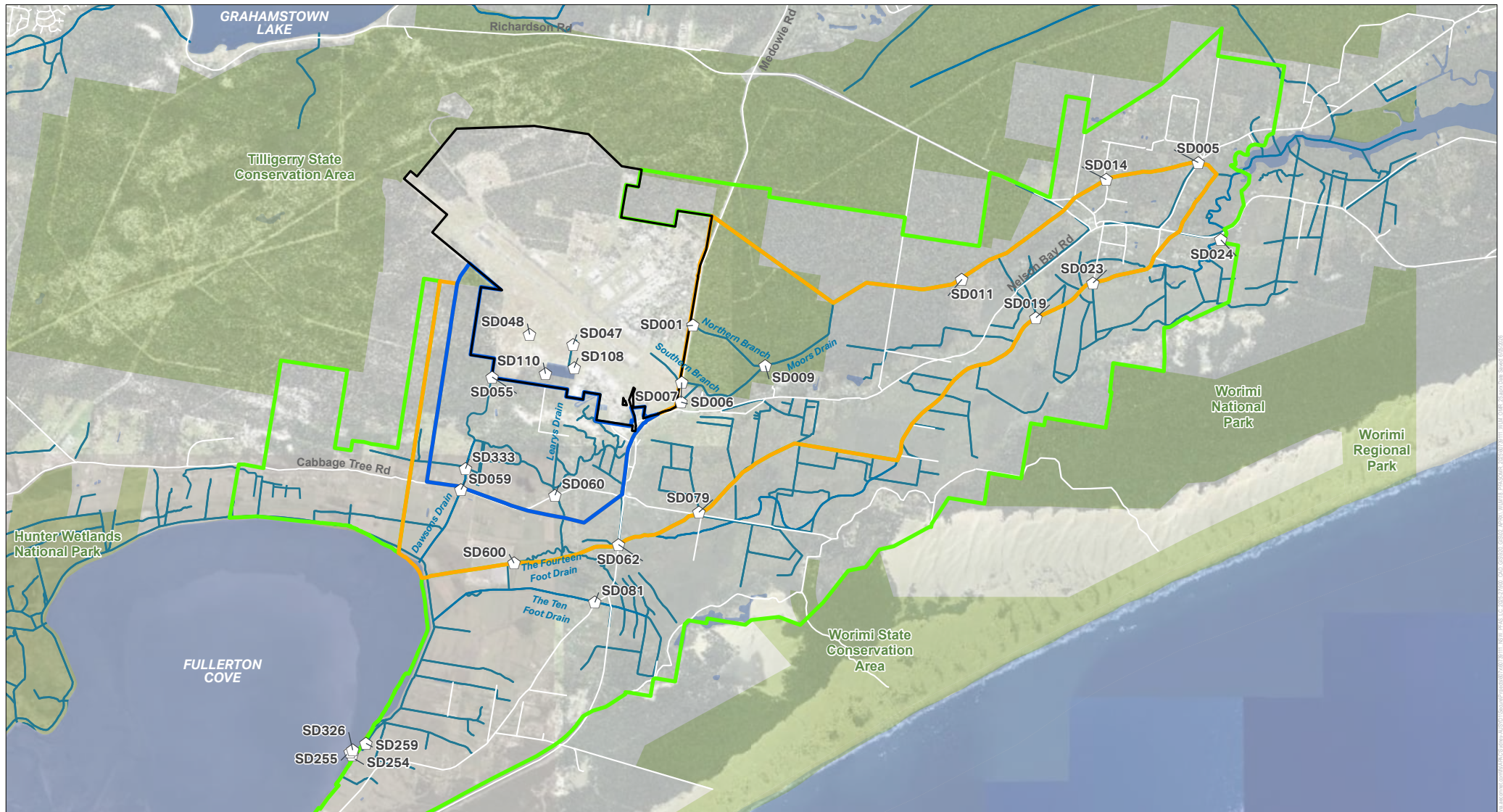


FIGURE F19: SEDIMENT ANALYTICAL RESULT DEVIATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway
- No deviations in the Monitoring period



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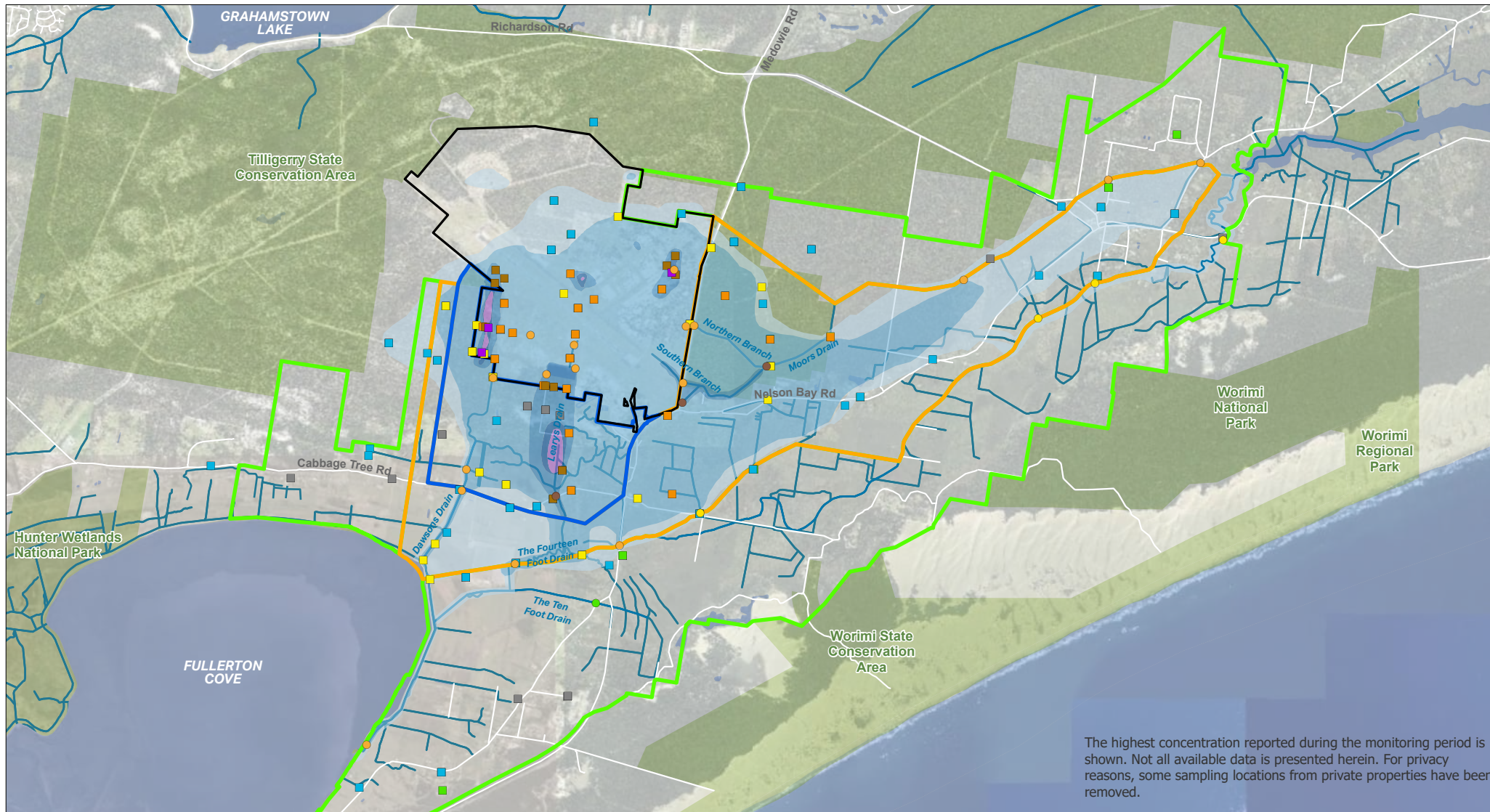
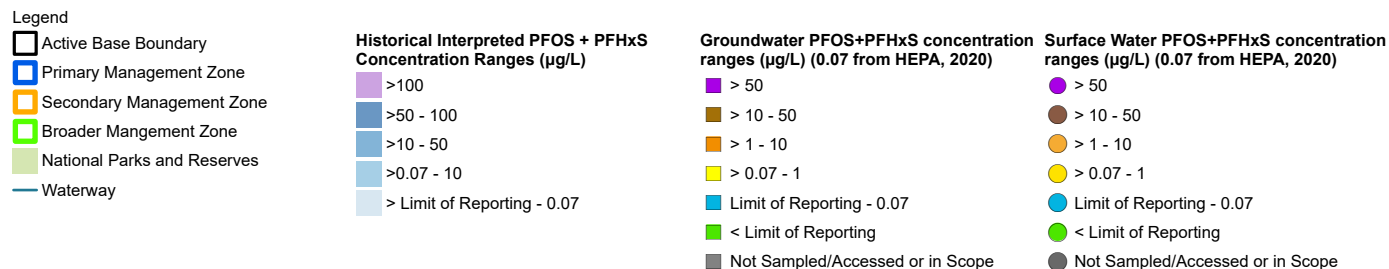


FIGURE F20: INFERRED EXTENT OF GROUNDWATER IMPACTS - PFOS+PFHXS - (0.07 UG/L)



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Note: the inferred extent of high concentration PFAS plumes as presented are based on historical (2020 – 2021) data.
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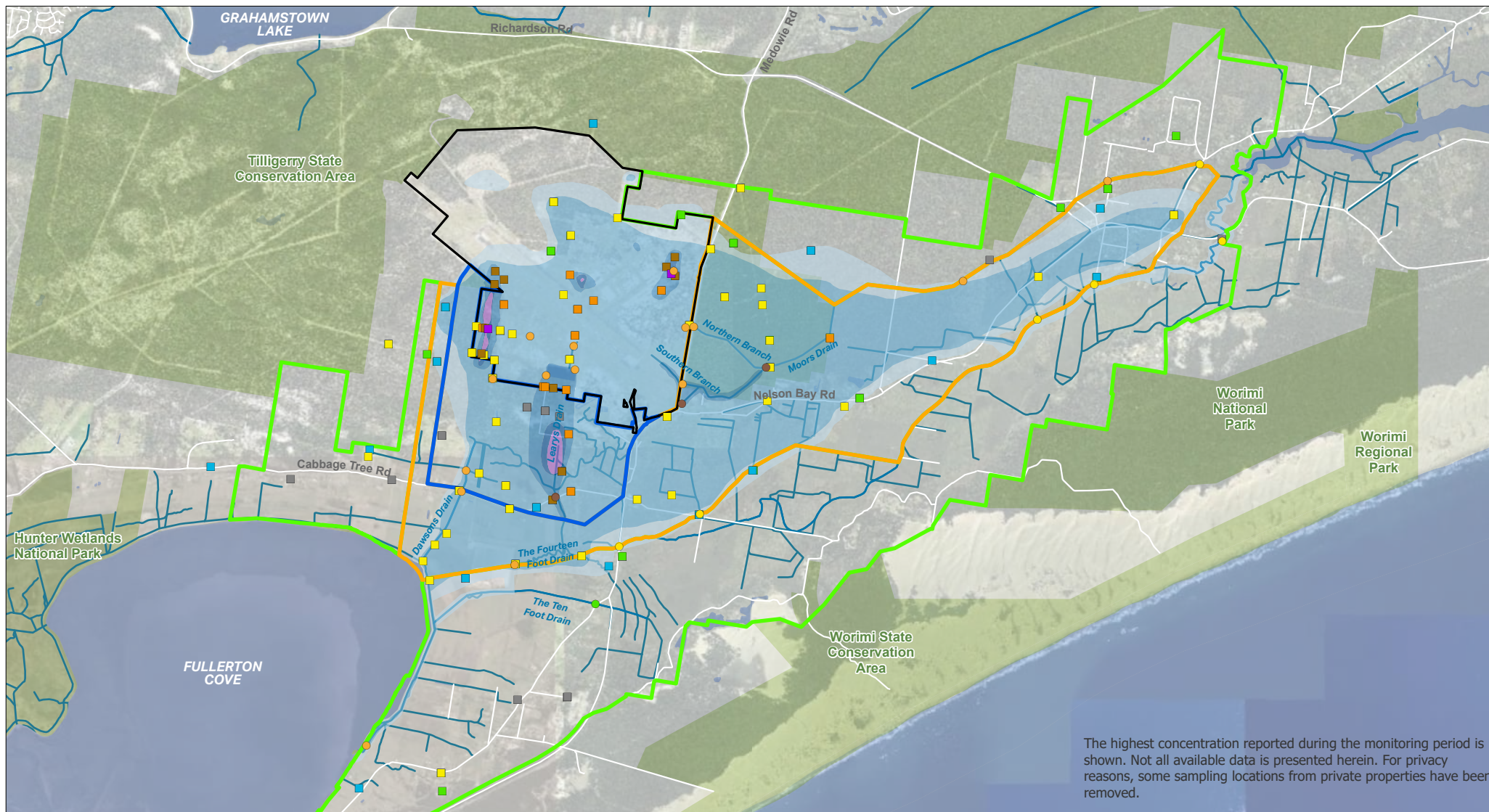


FIGURE F21: INFERRED EXTENT OF GROUNDWATER IMPACTS - PFOS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Waterway

Historical Interpreted PFOS + PFHxS Concentration Ranges (µg/L)

- >100
- >50 - 100
- >10 - 50
- >0.008 - 10
- > Limit of Reporting - 0.008

Groundwater - PFOS concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 1 - 10
- > 0.008 - 1
- Limit of Reporting - 0.008
- < Limit of Reporting
- Not Sampled/Accessed or in Scope

Surface Water - PFOS concentration ranges (µg/L)

- > 50
- > 10 - 50
- > 1 - 10
- > 0.008 - 1
- Limit of Reporting - 0.008
- < Limit of Reporting
- Not Sampled/Accessed or in Scope



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Note: the inferred extent of high concentration PFAS plumes as presented are based on historical (2020 - 2021) data.
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Appendix B

Tables

Table T1 - Groundwater Gauging and Observations

Location Code	On-base/Management Zone	Aquifer	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW106D	On-base	Deep	4.770	18.5	20	0.0	18.0	1/04/2025 10:39	1.049	3.721	19.52	HydraSleeve install visit. Encountered blockage at 19.5m. Unable to clear. Suspected root intrusion.
MW106D	On-base	Deep	4.770	18.5	20	0.0	18.0	3/04/2025 16:18	1.076	3.694	19.50	Sampling visit.
MW106D	On-base	Deep	4.77	18.5	20	0	18.50	8/10/2025 15:35	1.045	3.725	19.54	Sampling visit
MW106D	On-base	Deep	4.77	18.5	20	0	18.50	15/10/2025 12:21	1.093	3.677	-	Gauging visit
MW106S	On-base	Shallow	4.678	3.5	5	0.0	2.9	1/04/2025 10:38	1.052	3.626	3.99	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW106S	On-base	Shallow	4.678	3.5	5	0.0	2.9	3/04/2025 16:25	1.080	3.598	3.98	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW106S	On-base	Shallow	4.678	3.5	5	0	2.90	8/10/2025 15:29	1.045	3.633	4.47	Sampling visit
MW106S	On-base	Shallow	4.678	3.5	5	0	2.90	15/10/2025 12:22	1.094	3.584	-	Gauging visit
MW108D	On-base	Deep	3.080	18.5	20	0.0	18.0	31/03/2025 15:03	0.035	3.045	19.59	HydraSleeve install visit. Blockage at 19.59m. Unable to clear. Suspected root intrusion. Unable to secure well lid due to PVC/J-cap being too tall.
MW108D	On-base	Deep	3.080	18.5	20	0.0	18.0	4/04/2025 11:12	0.171	2.909	19.59	Sampling visit. Blockage at 19.59m. Unable to clear. Suspected root intrusion. Unable to secure well lid due to PVC/J-cap being too tall.
MW108D	On-base	Deep	3.08	18.5	20	0	18.00	9/10/2025 11:00	0.335	2.745	19.57	HydraSleeve install visit. Well operational however lid no secured. HydraSleeve installed.
MW108D	On-base	Deep	3.08	18.5	20	0	18.00	10/10/2025 9:41	0.320	2.760	19.56	Sampling visit
MW108S	On-base	Shallow	2.950	2.0	5	0.0	2.9	31/03/2025 15:01	0.000	2.950	4.36	HydraSleeve install visit. Water at TOC. Blockage at 4.36m. Unable to clear. Suspected root intrusion.
MW108S	On-base	Shallow	2.950	2.0	5	0.0	2.9	4/04/2025 11:17	0.142	2.808	4.37	Sampling visit. Blockage at 4.36m. Unable to clear. Suspected root intrusion.
MW108S	On-base	Shallow	2.95	2	5	0	3.30	9/10/2025 11:04	0.280	2.670	4.37	Sampling visit
MW109D	On-base	Deep	3.157	18.5	20	0.0	17.5	1/04/2025 14:43	0.000	3.157	18.98	HydraSleeve install visit. Water above TOC.
MW109D	On-base	Deep	3.157	18.5	20	0.0	17.5	4/04/2025 11:40	0.020	3.137	18.98	Sampling visit.
MW109D	On-base	Deep	3.157	18.5	20	0	17.80	9/10/2025 12:00	0.140	3.017	18.98	Sampling visit
MW134D	On-base	Deep	8.750	18.5	20	0.0	18.4	8/04/2025 10:03	1.992	6.758	19.92	HydraSleeve install visit. Well damaged, Gatic and PVC cracked.
MW134D	On-base	Deep	8.750	18.5	20	0.0	18.4	11/04/2025 9:23	2.035	6.715	19.91	Sampling visit. Well damaged, Gatic and PVC cracked.
MW134I	On-base	Intermediate	8.710	10.0	11.5	0.0	9.9	8/04/2025 10:05	1.951	6.759	11.48	HydraSleeve install visit.
MW134I	On-base	Intermediate	8.710	10.0	11.5	0.0	9.9	11/04/2025 9:31	1.982	6.728	11.48	Sampling visit.
MW155	On-base	Shallow	7.960	1.5	3.8	0.0	2.3	31/03/2025 13:19	0.860	7.100	3.80	HydraSleeve install visit.
MW155	On-base	Shallow	7.960	1.5	3.8	0.0	2.3	4/04/2025 9:20	0.969	6.991	3.81	Sampling visit.
MW166	On-base	Shallow	7.100	0.8	3.8	0.0	2.1	1/04/2025 14:01	1.028	6.072	3.67	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW166	On-base	Shallow	7.100	0.8	3.8	0.0	2.1	4/04/2025 10:10	1.000	6.100	3.66	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW166	On-base	Shallow	7.1	0.8	3.8	0	2.60	10/10/2025 8:41	0.805	6.295	3.64	Sampling visit
MW167	On-base	Shallow	7.190	0.7	3.7	0.6	2.8	1/04/2025 14:06	1.989	5.201	4.30	HydraSleeve install visit.
MW167	On-base	Shallow	7.190	0.7	3.7	0.6	2.8	4/04/2025 10:18	1.924	5.266	4.31	Sampling visit.
MW167	On-base	Shallow	7.19	0.7	3.7	0.6	3.30	10/10/2025 8:55	1.682	5.508	4.31	Sampling visit
MW168	On-base	Shallow	6.780	0.7	3.7	0.0	1.9	1/04/2025 14:12	1.125	5.655	3.44	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW168	On-base	Shallow	6.780	0.7	3.7	0.0	1.9	4/04/2025 10:27	1.100	5.680	3.44	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW168	On-base	Shallow	6.78	0.7	3.7	0	2.40	10/10/2025 9:08	0.898	5.882	3.44	Sampling visit
MW169D	On-base	Deep	5.800	18.0	19.5	0.0	17.8	1/04/2025 14:23	0.600	5.200	19.29	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW169D	On-base	Deep	5.800	18.0	19.5	0.0	17.8	4/04/2025 10:40	0.645	5.155	19.30	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW169D	On-base	Deep	5.8	18	19.5	0	18.20	10/10/2025 9:28	0.630	5.170	19.28	Sampling visit
MW169S	On-base	Shallow	5.830	0.7	3.7	0.0	2.2	1/04/2025 14:18	0.572	5.258	3.71	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW169S	On-base	Shallow	5.830	0.7	3.7	0.0	2.2	4/04/2025 10:40	0.670	5.160	3.71	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW169S	On-base	Shallow	5.83	0.7	3.7	0	2.70	10/10/2025 9:23	0.650	5.180	3.71	Sampling visit
MW171D	On-base	Deep	4.970	18.8	20.3	0.0	18.7	31/03/2025 14:33	0.250	4.720	20.28	HydraSleeve install visit.
MW171D	On-base	Deep	4.970	18.8	20.3	0.0	18.7	4/04/2025 10:55	0.435	4.535	20.29	Sampling visit.
MW171S	On-base	Shallow	5.020	0.7	3.7	0.0	2.1	31/03/2025 14:24	0.290	4.730	3.67	HydraSleeve install visit. Data logger removed.
MW171S	On-base	Shallow	5.020	0.7	3.7	0.0	2.1	4/04/2025 11:00	0.490	4.530	3.67	Sampling visit.
MW172	On-base	Shallow	4.880	0.7	3.7	0.0	1.8	31/03/2025 14:39	0.050	4.830	3.36	HydraSleeve install visit. Data logger removed. Blockage at 3.36m. Unable to clear. Suspected root intrusion.
MW172	On-base	Shallow	4.880	0.7	3.7	0.0	1.8	1/04/2025 14:32	0.120	4.760	3.34	Sampling visit. Blockage at 3.36m. Unable to clear. Suspected root intrusion.
MW172	On-base	Shallow	4.88	0.7	3.7	0	2.30	9/10/2025 10:37	0.605	4.275	3.33	Sampling visit
MW175D	On-base	Deep	4.110	19.5	21	0.6	20.0	31/03/2025 15:28	0.910	3.200	21.50	HydraSleeve install visit. Data logger removed.
MW175D	On-base	Deep	4.110	19.5	21	0.6	20.0	4/04/2025 11:28	1.054	3.056	21.51	Sampling visit.
MW175D	On-base	Deep	4.11	19.5	21	0.57	20.50	9/10/2025 11:21	1.035	3.075	21.50	Sampling visit. Good condition. Data logger removed 11:21am. Replaced at 11:25am.
MW179D	On-base	Deep	4.760	18.5	20	0.0	18.0	31/03/2025 13:56	0.780	3.980	19.51	HydraSleeve install visit. Hitting blockage/obstruction at 19.51m. Unable to clear. Suspected root intrusion.
MW179D	On-base	Deep	4.760	18.5	20	0.0	18.0	1/04/2025 13:41	0.791	3.969	19.50	Sampling visit. Hitting blockage/obstruction at 19.51m. Unable to clear. Suspected root intrusion.
MW179S	On-base	Shallow	4.710	0.8	3.8	0.0	2.2	31/03/2025 14:01	0.766	3.944	3.79	HydraSleeve install visit.
MW179S	On-base	Shallow	4.710	0.8	3.8	0.0	2.2	1/04/2025 13:45	0.790	3.920	3.67	Sampling visit.
MW196	On-base	Shallow	6.760	0.8	3.8	0.0	2.3	8/04/2025 8:55	0.879	5.881	3.83	HydraSleeve install visit.
MW196	On-base	Shallow	6.760	0.8	3.8	0.0	2.3	11/04/2025 8:34	0.903	5.857	3.83	Sampling visit.
MW198	On-base	Shallow	6.110	0.8	3.8	0.0	2.3	8/04/2025 9:07	1.075	5.035	3.81	HydraSleeve install visit.
MW198	On-base	Shallow	6.110	0.8	3.8	0.0	2.3	11/04/2025 8:44	1.104	5.006	3.86	Sampling visit.
MW200	On-base	Shallow	6.470	1.0	4	0.0	2.1	8/04/2025 8:43	1.024	5.446	3.66	HydraSleeve install visit.
MW200	On-base	Shallow	6.470	1.0	4	0.0	2.1	11/04/2025 8:24	1.164	5.306	3.60	Sampling visit.
MW201D	On-base	Deep	5.810	18.1	19.6	0.0	17.9	8/04/2025 8:28	0.856	4.954	19.42	HydraSleeve install visit.
MW201D	On-base	Deep	5.810	18.1	19.6	0.0	17.9	11/04/2025 8:14	0.902	4.908	19.41	Sampling visit.
MW201S	On-base	Shallow	5.800	1.0	4	0.0	2.5	8/04/2025 8:33	0.834	4.966	4.03	HydraSleeve install visit.
MW201S	On-base	Shallow	5.800	1.0	4	0.0	2.5	11/04/2025 8:05	0.876	4.924	4.03	Sampling visit.
MW202D	On-base	Deep	5.170	19.5	21	0.0	19.2	31/03/2025 13:49	0.625	4.545	20.76	HydraSleeve install visit.
MW202D	On-base	Deep	5.170	19.5	21	0.0	19.2	1/04/2025 13:15	0.726	4.444	20.73	Sampling visit.
MW202S	On-base	Shallow	5.210	0.8	3.8	0.0	2.1	31/03/2025 13:45	0.670	4.540	3.69	HydraSleeve install visit.
MW202S	On-base	Shallow	5.210	0.8	3.8	0.0	2.1	1/04/2025 13:31	0.760	4.450	3.68	Sampling visit.
MW208	On-base	Shallow	6.990	1.2	4.2	0.0	2.6	31/03/2025 12:16	1.940	5.050	4.11	HydraSleeve install visit.
MW208	On-base	Shallow	6.990	1.2	4.2	0.0	2.6	4/04/2025 9:05	1.942	5.048	4.11	Sampling visit.
MW210D	On-base	Deep	7.350	18.5	20	0.0	18.5	31/03/2025 13:08	2.775	4.575	20.07	HydraSleeve install visit.
MW210D	On-base	Deep	7.350	18.5	20	0.0	18.5	4/04/2025 9:30	2.740	4.610	20.09	Sampling visit.
MW210S	On-base	Shallow	7.220	2.0	5	0.0	3.2	31/03/2025 13:04	2.650	4.570	4.75	HydraSleeve install visit.
MW210S	On-base	Shallow	7.220	2.0	5	0.0	3.2	4/04/2025 9:36	2.605	4.615	4.75	Sampling visit.
MW240D	On-base	Deep	5.742	18.5	20	0.0	18.8	15/04/2025 12:12	1.304	4.438	20.30	HydraSleeve install visit.
MW240D	On-base	Deep	5.742	18.5	20	0.0	18.8	16/04/2025 13:47	1.310	4.432	20.30	Sampling visit.
MW240D	On-base	Deep	5.742	18.5	20	0	19.30	9/10/2025 8:26	0.970	4.772	20.29	Sampling visit
MW245D	On-base	Deep	9.311	18.5	20	0.9	19.6	8/04/2025 10:30	1.513	7.798	21.19	HydraSleeve install visit.
MW245D	On-base	Deep	9.311	18.5	20	0.9	19.6	11/04/2025 10:00	1.544	7.767	21.20	Sampling visit.
MW245S	On-base	Shallow	9.292	1.0	4	0.8	3.3	8/04/2025 10:30	1.453	7.839	4.87	HydraSleeve install visit.
MW245S	On-base	Shallow	9.292	1.0	4	0.8	3.3	11/04/2025 9:56	1.486	7.806	4.87	Sampling visit.
MW281S	On-base	Shallow	5.290	1.0	4	0.0	2.4	15/04/2025 12:33	0.975	4.315	3.99	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW281S	On-base	Shallow	5.290	1.0	4	0.0	2.4	16/04/2025 14:03	0.973	4.317	4.00	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW281S	On-base	Shallow	5.29	1	4	0	2.90	9/10/2025 8:54	0.745	4.545	4.00	Sampling visit
MW282S	On-base	Shallow	5.370	1.0	4	0.0	2.0	15/04/2025 12:18	0.881	4.489	3.52	HydraSleeve install visit.
MW282S	On-base	Shallow	5.370	1.0	4	0.0	2.0	16/04/2025 13:54	0.871	4.499	3.46	Sampling visit.
MW282S	On-base	Shallow	5.37	1	4	0	2.50	9/10/2025 8:38	0.584	4.786	3.46	Sampling visit
MW304	On-base	Shallow	8.290	0.6	5.5	0.7	3.9	31/03/2025 12:00	3.590	4.700	5.40	HydraSleeve install visit.
MW304	On-base	Shallow	8.290	0.6	5.5	0.7	3.9	4/04/2025 8:46	3.650	4.640	5.41	Sampling visit.
MW317D	On-base	Deep	7.960	18.5	20	0.0	19.0	8/04/2025 10:17	0.906	7.054	20.50	HydraSleeve install visit.
MW317D	On-base	Deep	7.960	18.5	20	0.0	19.0	11/04/2025 9:48	0.934	7.026	20.53	Sampling visit.

Table T1 - Groundwater Gauging and Observations

Location Code	On-base/Management Zone	Aquifer	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW317S	On-base	Shallow	7.970	1.0	4	0.0	2.6	8/04/2025 10:17	0.927	7.043	4.11	HydraSleeve install visit.
MW317S	On-base	Shallow	7.970	1.0	4	0.0	2.6	11/04/2025 9:41	0.962	7.008	4.10	Sampling visit.
MW329	On-base	Shallow	6.122	2.4	5.4	0.0	4.6	15/04/2025 12:27	1.723	4.399	6.15	HydraSleeve install visit.
MW329	On-base	Shallow	6.122	2.4	5.4	0.0	4.6	16/04/2025 13:59	1.719	4.403	6.17	Sampling visit.
MW329	On-base	Shallow	6.1215	2.4	5.4	0	5.10	9/10/2025 8:47	1.451	4.671	6.15	Sampling visit
MW340D	On-base	Deep	4.955	17.0	20	0.9	19.7	15/04/2025 13:15	1.471	3.484	21.25	HydraSleeve install visit.
MW340D	On-base	Deep	4.955	17.0	20	0.9	19.7	16/04/2025 14:44	1.510	3.445	21.24	Sampling visit.
MW340D	On-base	Deep	4.955	17	20	0.905	20.20	9/10/2025 10:08	1.310	3.645	21.26	Sampling visit
MW340S	On-base	Shallow	4.962	2.0	5	0.9	4.2	15/04/2025 13:14	1.502	3.460	5.72	HydraSleeve install visit.
MW340S	On-base	Shallow	4.962	2.0	5	0.9	4.2	16/04/2025 14:39	1.532	3.430	5.72	Sampling visit.
MW340S	On-base	Shallow	4.962	2	5	0.906	4.70	9/10/2025 10:13	1.332	3.630	5.72	Sampling visit
MW342D	On-base	Deep	4.764	17.0	20	0.8	19.7	15/04/2025 12:57	1.258	3.506	21.23	HydraSleeve install visit.
MW342D	On-base	Deep	4.764	17.0	20	0.8	19.7	16/04/2025 14:21	1.280	3.484	21.24	Sampling visit.
MW342D	On-base	Deep	4.764	17	20	0.842	20.20	9/10/2025 9:45	1.149	3.615	21.24	Sampling visit. Good condition. Data logger removed at 9:48am
MW344D	On-base	Deep	4.521	17.0	20	0.9	18.4	15/04/2025 12:46	1.095	3.426	19.98	HydraSleeve install visit.
MW344D	On-base	Deep	4.521	17.0	20	0.9	18.4	16/04/2025 14:11	1.128	3.393	19.97	Sampling visit.
MW344D	On-base	Deep	4.521	17	20	0.877	18.90	9/10/2025 9:09	1.085	3.436	19.98	Sampling visit. Good condition. Datalogger in well not removed
MW344S	On-base	Shallow	4.777	2.0	5	1.0	4.2	15/04/2025 12:48	1.369	3.408	5.77	HydraSleeve install visit.
MW344S	On-base	Shallow	4.777	2.0	5	1.0	4.2	16/04/2025 14:16	1.393	3.384	5.77	Sampling visit.
MW344S	On-base	Shallow	4.777	2	5	0.956	4.70	9/10/2025 9:18	1.346	3.431	5.76	Sampling visit
MW354S	On-base	Shallow	4.993	2.0	5	1.0	4.3	15/04/2025 13:03	1.480	3.513	5.86	HydraSleeve install visit.
MW354S	On-base	Shallow	4.993	2.0	5	1.0	4.3	16/04/2025 14:30	1.552	3.441	5.86	Sampling visit.
MW354S	On-base	Shallow	4.993	2	5	0.956	4.80	9/10/2025 9:57	1.350	3.643	5.86	Sampling visit
MW406	On-base	Shallow	8.270	Unknown	Unknown	0.5	1.4	31/03/2025 11:39	1.589	6.681	2.98	HydraSleeve install visit.
MW406	On-base	Shallow	8.270	Unknown	Unknown			3/04/2025 15:40	-	n/a	-	Data is missing due to technical error.
MW441	On-base	Shallow	7.669	5.0	6	0.4	3.8	31/03/2025 12:09	2.924	4.745	5.29	HydraSleeve install visit.
MW441	On-base	Shallow	7.669	5.0	6	0.4	3.8	4/04/2025 8:54	2.930	4.739	5.30	Sampling visit.
MW466	On-base	Shallow	4.320	Unknown	Unknown	0.8	1.7	31/03/2025 15:35	1.334	2.986	3.22	HydraSleeve install visit.
MW466	On-base	Shallow	4.320	Unknown	Unknown	0.8	1.7	4/04/2025 11:51	1.481	2.839	3.23	Sampling visit.
MW466	On-base	Shallow	4.32	0	0	0.8	2.20	9/10/2025 11:28	1.377	2.943	3.21	Sampling visit
MW468	On-base	Shallow	4.020	1.0	4	0.8	2.5	31/03/2025 15:40	0.985	3.035	4.04	HydraSleeve install visit.
MW468	On-base	Shallow	4.020	1.0	4	0.8	2.5	4/04/2025 11:35	1.130	2.890	4.05	Sampling visit.
MW468	On-base	Shallow	4.02	1	4	0.8	3.00	9/10/2025 11:36	1.000	3.020	4.05	Sampling visit
MW886	On-base	Shallow	7.910	2.0	5	0.0	4.1	31/03/2025 11:51	2.558	5.352	5.14	HydraSleeve install visit.
MW886	On-base	Shallow	7.910	2.0	5	0.0	4.1	3/04/2025 16:04	0.000	7.910	5.08	Sampling visit. HydraSleeve blocking DTW
MW104D	Primary Management Zone	Deep	3.919	18.5	20	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW104S	Primary Management Zone	Shallow	3.955	3.5	5	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW126D	Primary Management Zone	Deep	1.794	18.5	20	0.0	18.8	1/04/2025 9:15	0.719	1.075	20.32	HydraSleeve install visit.
MW126D	Primary Management Zone	Deep	1.794	18.5	20	0.0	18.8	3/04/2025 9:34	0.748	1.046	20.32	Sampling visit.
MW126D	Primary Management Zone	Deep	1.794	18.5	20	0	19.30	9/10/2025 14:31	1.047	0.747	20.32	Sampling visit
MW126D	Primary Management Zone	Deep	1.794	18.5	20	0	19.30	15/10/2025 12:45	1.123	0.671	-	Gauging visit
MW126S	Primary Management Zone	Shallow	1.790	5.5	7	0.0	5.1	1/04/2025 9:13	0.071	1.719	6.61	HydraSleeve install visit.
MW126S	Primary Management Zone	Shallow	1.790	5.5	7	0.0	5.1	3/04/2025 9:31	0.740	1.050	6.59	Sampling visit. Lugs rusted.
MW126S	Primary Management Zone	Shallow	1.79	5.5	7	0	5.60	9/10/2025 14:29	1.035	0.755	6.59	Sampling visit
MW126S	Primary Management Zone	Shallow	1.79	5.5	7	0	5.60	15/10/2025 12:45	1.112	0.678	-	Gauging visit
MW177	Primary Management Zone	Shallow	6.458	2.6	5.6	0	4.80	20/10/2025 10:59	4.846	1.612	5.18	HydraSleeve install visit. Poor condition. Root intrusion causing blockage at 4.98m. Unable to clear, further maintenance required.
MW177	Primary Management Zone	Shallow	6.458	2.6	5.6	0	4.80	20/10/2025 14:40	4.845	1.613	5.18	Sampling visit. Poor condition
MW178	Primary Management Zone	Shallow	1.760	1.2	4.2	0.0	2.7	1/04/2025 15:23	0.622	1.138	4.23	HydraSleeve install visit.
MW178	Primary Management Zone	Shallow	1.760	1.2	4.2	0.0	2.7	3/04/2025 10:38	0.608	1.152	4.23	Sampling visit.
MW178	Primary Management Zone	Shallow	1.76	1.2	4.2	0	3.20	8/10/2025 11:24	0.365	1.395	5.97	Sampling visit
MW184D	Primary Management Zone	Deep	3.073	18.5	20	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW184S	Primary Management Zone	Shallow	3.106	1.0	4	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW185S	Primary Management Zone	Shallow	2.971	1	4	0	n/a	20/10/2025 10:30	n/a	n/a	n/a	Unable to locate - well destroyed or lost under stockpile on site
MW188D	Primary Management Zone	Deep	1.354	18.5	20	0.0	18.4	1/04/2025 10:04	0.261	1.093	19.94	HydraSleeve install visit.
MW188D	Primary Management Zone	Deep	1.354	18.5	20	0.0	18.4	3/04/2025 9:21	0.260	1.094	19.96	Sampling visit.
MW188D	Primary Management Zone	Deep	1.354	18.5	20	0	18.90	15/10/2025 10:47	0.645	0.709	-	Gauging visit
MW188S	Primary Management Zone	Shallow	1.439	0.8	3.8	0.0	2.3	1/04/2025 10:02	0.702	0.737	3.81	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW188S	Primary Management Zone	Shallow	1.439	0.8	3.8	0.0	2.3	3/04/2025 9:16	0.725	0.714	3.81	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW188S	Primary Management Zone	Shallow	1.439	0.8	3.8	0	2.80	15/10/2025 10:48	0.806	0.633	-	Gauging visit
MW220S	Primary Management Zone	Shallow	2.328	1	4	0	2.00	20/10/2025 10:18	0.683	1.645	3.99	HydraSleeve install visit. Well operational however well lid was smashed
MW220S	Primary Management Zone	Shallow	2.328	1	4	0	2.00	20/10/2025 14:14	0.683	1.645	3.99	HydraSleeve install visit. Well operational however well lid was smashed
MW238D	Primary Management Zone	Deep	2.211	18.5	20	0.0	n/a	15/04/2025 12:00	-	n/a	-	Unable to access - private property access not confirmed.
MW238D	Primary Management Zone	Deep	2.211	18.5	20	0	n/a	20/10/2025 14:52	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
MW238S	Primary Management Zone	Shallow	2.270	1.0	4	0.0	n/a	15/04/2025 12:00	-	n/a	-	Unable to access - private property access not confirmed.
MW238S	Primary Management Zone	Shallow	2.27	1	4	0	n/a	20/10/2025 14:55	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
MW271D	Primary Management Zone	Deep	1.308	18.5	20	0.0	19.0	14/04/2025 10:04	0.271	1.037	20.53	HydraSleeve install visit.
MW271D	Primary Management Zone	Deep	1.308	18.5	20	0.0	19.0	14/04/2025 14:06	0.270	1.038	20.52	Sampling visit.
MW271D	Primary Management Zone	Deep	1.308	18.5	20	0	19.50	13/10/2025 11:04	0.325	0.983	20.26	Sampling visit
MW271S	Primary Management Zone	Shallow	1.316	1.0	4	0.0	2.5	14/04/2025 10:07	0.279	1.037	4.00	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW271S	Primary Management Zone	Shallow	1.316	1.0	4	0.0	2.5	14/04/2025 14:10	0.285	1.031	4.00	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW271S	Primary Management Zone	Shallow	1.316	1	4	0	3.00	13/10/2025 10:56	0.323	0.993	3.99	Sampling visit
MW278D	Primary Management Zone	Deep	1.289	18.5	20	0.0	18.7	31/03/2025 11:08	0.148	1.141	20.25	HydraSleeve install visit.
MW278D	Primary Management Zone	Deep	1.289	18.5	20	0.0	18.7	3/04/2025 9:45	0.269	1.020	20.26	Sampling visit.
MW278D	Primary Management Zone	Deep	1.289	18.5	20	0	19.20	10/10/2025 10:58	0.501	0.788	20.26	Sampling visit
MW278S	Primary Management Zone	Shallow	1.253	1.5	3	0.0	1.5	31/03/2025 11:15	0.070	1.183	3.00	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW278S	Primary Management Zone	Shallow	1.253	1.5	3	0.0	1.5	3/04/2025 9:51	0.162	1.091	3.02	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW278S	Primary Management Zone	Shallow	1.253	1.5	3	0	2.00	10/10/2025 11:02	0.500	0.753	3.01	Sampling visit
MW731D	Primary Management Zone	Deep	2.190	18.5	20	0.0	19.6	8/04/2025 15:54	1.032	1.158	21.11	HydraSleeve install visit. Hinge on well monument lid broken.
MW731D	Primary Management Zone	Deep	2.190	18.5	20	0.0	19.6	9/04/2025 14:05	1.049	1.141	21.10	Sampling visit. Hinge on well monument lid broken.
MW731D	Primary Management Zone	Deep	2.19	18.5	20	0	20.10	10/10/2025 13:09	1.180	1.010	21.10	Sampling visit
MW731S	Primary Management Zone	Shallow	2.050	2.5	5.5	0.0	4.4	8/04/2025 15:53	0.895	1.155	5.99	HydraSleeve install visit.
MW731S	Primary Management Zone	Shallow	2.050	2.5	5.5	0.0	4.4	9/04/2025 14:12	0.918	1.132	6.03	Sampling visit.
MW731S	Primary Management Zone	Shallow	2.05	2.5	5.5	0	4.90	10/10/2025 13:11	1.040	1.010	6.04	Sampling visit
MW107D	Secondary Management Zone	Deep	3.362	18.5	20	0.0	18.4	7/04/2025 16:13	0.298	3.064	19.93	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW107D	Secondary Management Zone	Deep	3.362	18.5	20	0.0	18.4	9/04/2025 15:39	0.284	3.078	19.93	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW107D	Secondary Management Zone	Deep	3.362	18.5	20	0	18.90	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW107S	Secondary Management Zone	Shallow	3.322	2.0	5	0.0	3.2	7/04/2025 16:11	0.253	3.069	4.76	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW107S	Secondary Management Zone	Shallow	3.322	2.0	5	0.0	3.2	9/04/2025 15:55	0.244	3.078	4.75	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW107S	Secondary Management Zone	Shallow	3.322	2	5	0	3.70	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW121	Secondary Management Zone	Shallow	1.589	4.5	6	0.8	4.5	31/03/2025 9:56	0.070	1.519	5.98	HydraSleeve install visit.

Table T1 - Groundwater Gauging and Observations

Location Code	On-base/Management Zone	Aquifer	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW121	Secondary Management Zone	Shallow	1.589	4.5	6	0.8	4.5	3/04/2025 12:00	0.255	1.334	5.98	Sampling visit.
MW122	Secondary Management Zone	Shallow	1.851	5.5	7	0.8	5.5	1/04/2025 11:33	0.936	0.915	6.96	HydraSleeve install visit.
MW122	Secondary Management Zone	Shallow	1.851	5.5	7	0.8	5.5	3/04/2025 12:35	0.990	0.861	6.95	Sampling visit.
MW122	Secondary Management Zone	Shallow	1.851	5.5	7	0.8	5.90	15/10/2025 8:47	1.345	0.506	-	Gauging visit
MW123	Secondary Management Zone	Shallow	1.524	4.5	6	0.8	4.5	1/04/2025 12:25	0.475	1.049	5.96	HydraSleeve install visit.
MW123	Secondary Management Zone	Shallow	1.524	4.5	6	0.8	4.5	3/04/2025 14:35	0.525	0.999	5.97	Sampling visit.
MW123	Secondary Management Zone	Shallow	1.524	4.5	6	0.8	4.90	15/10/2025 9:43	1.012	0.512	-	Gauging visit
MW125D	Secondary Management Zone	Deep	2.173	18.5	20	0.0	18.7	1/04/2025 9:44	1.000	1.173	20.23	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW125D	Secondary Management Zone	Deep	2.173	18.5	20	0.0	18.7	3/04/2025 10:25	1.030	1.143	20.23	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW125D	Secondary Management Zone	Deep	2.173	18.5	20	0	19.20	10/10/2025 11:27	1.263	0.910	20.23	HydraSleeve install visit. New Hydrasleeve installed.
MW125D	Secondary Management Zone	Deep	2.173	18.5	20	0	19.20	13/10/2025 11:25	1.322	0.851	20.22	Sampling visit
MW125D	Secondary Management Zone	Deep	2.173	18.5	20	0	19.20	15/10/2025 13:57	1.350	0.823	-	Gauging visit
MW125S	Secondary Management Zone	Shallow	2.197	6.0	7.5	0.0	6.4	1/04/2025 9:45	1.041	1.156	7.46	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW125S	Secondary Management Zone	Shallow	2.197	6.0	7.5	0.0	6.4	3/04/2025 10:21	1.064	1.133	7.47	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW125S	Secondary Management Zone	Shallow	2.197	6	7.5	0	6.40	10/10/2025 11:22	1.310	0.887	7.46	Sampling visit
MW125S	Secondary Management Zone	Shallow	2.197	6	7.5	0	6.40	15/10/2025 13:56	1.391	0.806	-	Gauging visit
MW130D	Secondary Management Zone	Deep	5.858	15.0	16.5	0.0	15.0	7/04/2025 10:20	0.701	5.157	16.56	HydraSleeve install visit.
MW130D	Secondary Management Zone	Deep	5.858	15.0	16.5	0.0	15.0	10/04/2025 9:43	0.735	5.123	16.46	Sampling visit.
MW130D	Secondary Management Zone	Deep	5.858	15	16.5	0	15.50	7/10/2025 12:02	n/a	n/a	n/a	Unable to access due to well being under flood water
MW130S	Secondary Management Zone	Shallow	5.794	1.0	4	0.0	2.3	7/04/2025 10:15	0.642	5.152	3.84	HydraSleeve install visit.
MW130S	Secondary Management Zone	Shallow	5.794	1.0	4	0.0	2.3	10/04/2025 9:49	0.672	5.122	3.83	Sampling visit.
MW130S	Secondary Management Zone	Shallow	5.794	1	4	0	2.80	7/10/2025 12:02	n/a	n/a	n/a	Unable to access due to well being under flood water
MW132D	Secondary Management Zone	Deep	6.138	15.0	16.5	0.0	14.6	7/04/2025 11:20	2.586	3.552	16.10	HydraSleeve install visit.
MW132D	Secondary Management Zone	Deep	6.138	15.0	16.5	0.0	14.6	10/04/2025 10:16	2.590	3.548	16.09	Sampling visit.
MW132D	Secondary Management Zone	Deep	6.138	15	16.5	0	15.10	8/10/2025 9:47	1.890	4.248	16.10	Sampling visit
MW132I	Secondary Management Zone	Intermediate	6.164	8.4	9.9	0.0	8.7	7/04/2025 11:25	2.583	3.581	9.79	HydraSleeve install visit. Lugs rusted.
MW132I	Secondary Management Zone	Intermediate	6.164	8.4	9.9	0.0	8.7	10/04/2025 10:24	2.593	3.571	9.76	Sampling visit. Lugs rusted.
MW132I	Secondary Management Zone	Intermediate	6.164	8.4	9.9	0	8.70	8/10/2025 9:57	1.885	4.279	9.78	Sampling visit
MW144	Secondary Management Zone	Shallow	1.923	1.0	4	0.0	3.4	26/05/2025 13:07	1.015	0.908	4.940	HydraSleeve install visit.
MW144	Secondary Management Zone	Shallow	1.923	1.0	4	0.0	3.4	27/05/2025 9:25	1.030	0.893	4.935	Sampling visit.
MW144	Secondary Management Zone	Shallow	1.923	1	4	0	1.50	13/10/2025 13:33	-	n/a	4.93	Sampling visit. Well operational, however J-cap was loose. The HydraSleeve was blocking depth to water.
MW146AD	Secondary Management Zone	Deep	1.620	18.5	20	0.0	18.5	1/04/2025 9:31	0.510	1.110	20.07	HydraSleeve install visit.
MW146AD	Secondary Management Zone	Deep	1.620	18.5	20	0.0	18.5	3/04/2025 10:06	0.558	1.062	20.07	Sampling visit.
MW146AD	Secondary Management Zone	Deep	1.62	18.5	20	0	19.00	10/10/2025 12:12	0.820	0.800	20.07	Sampling visit
MW146AD	Secondary Management Zone	Deep	1.62	18.5	20	0	19.00	15/10/2025 12:53	0.919	0.701	-	Gauging visit
MW146S	Secondary Management Zone	Shallow	1.802	0.8	3.8	0.0	2.2	1/04/2025 9:30	0.668	1.134	3.78	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW146S	Secondary Management Zone	Shallow	1.802	0.8	3.8	0.0	2.2	3/04/2025 10:02	0.700	1.102	3.78	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW146S	Secondary Management Zone	Shallow	1.802	0.8	3.8	0	2.70	10/10/2025 12:10	0.990	0.812	3.79	Sampling visit
MW146S	Secondary Management Zone	Shallow	1.802	0.8	3.8	0	2.70	15/10/2025 12:51	1.074	0.728	-	Gauging visit
MW147D	Secondary Management Zone	Deep	0.810	23.7	26.7	0.0	25.2	10/04/2025 13:34	0.285	0.525	26.76	HydraSleeve install visit.
MW147D	Secondary Management Zone	Deep	0.810	23.7	26.7	0.0	25.2	11/04/2025 11:38	0.286	0.524	26.76	Sampling visit.
MW147S	Secondary Management Zone	Shallow	0.710	1.0	4	0.0	2.7	10/04/2025 13:35	0.715	-0.005	4.20	HydraSleeve install visit.
MW147S	Secondary Management Zone	Shallow	0.710	1.0	4	0.0	2.7	11/04/2025 11:43	0.743	-0.033	4.20	Sampling visit.
MW150D	Secondary Management Zone	Deep	2.143	18.5	20	0.0	18.7	31/03/2025 9:44	0.491	1.652	20.26	HydraSleeve install visit.
MW150D	Secondary Management Zone	Deep	2.143	18.5	20	0.0	18.7	3/04/2025 16:42	0.550	1.593	20.25	Sampling visit.
MW150S	Secondary Management Zone	Shallow	2.111	0.6	3.6	0.0	2.0	31/03/2025 9:35	0.365	1.746	3.55	HydraSleeve install visit.
MW150S	Secondary Management Zone	Shallow	2.111	0.6	3.6	0.0	2.0	3/04/2025 16:39	0.399	1.712	3.61	Sampling visit.
MW160	Secondary Management Zone	Shallow	4.212	1.0	4	0.0	2.6	7/04/2025 11:40	1.337	2.875	4.10	HydraSleeve install visit.
MW160	Secondary Management Zone	Shallow	4.212	1.0	4	0.0	2.6	10/04/2025 10:43	1.362	2.850	4.03	Sampling visit.
MW160	Secondary Management Zone	Shallow	4.212	1	4	0	3.10	8/10/2025 9:29	0.709	3.503	4.01	Sampling visit
MW161D	Secondary Management Zone	Deep	2.057	18.8	20.3	0.0	18.8	7/04/2025 13:20	0.571	1.486	20.25	HydraSleeve install visit.
MW161D	Secondary Management Zone	Deep	2.057	18.8	20.3	0.0	18.8	10/04/2025 12:30	0.596	1.461	20.28	Sampling visit.
MW161S	Secondary Management Zone	Shallow	2.052	1.0	4	0.0	2.5	7/04/2025 13:31	0.576	1.476	4.03	HydraSleeve install visit.
MW161S	Secondary Management Zone	Shallow	2.052	1.0	4	0.0	2.5	10/04/2025 12:40	0.600	1.452	4.02	Sampling visit.
MW162D	Secondary Management Zone	Deep	2.876	18.6	20.1	0.0	n/a	1/04/2025 11:15	-	n/a	-	Unable to access due to jcap being jammed under well casing.
MW162D	Secondary Management Zone	Deep	2.876	18.6	20.1	0.0	18.6	26/05/2025 15:00	0.872	2.004	20.150	HydraSleeve install visit.
MW162D	Secondary Management Zone	Deep	2.876	18.6	20.1	0.0	18.6	27/05/2025 11:13	0.907	1.969	20.140	Sampling visit.
MW162D	Secondary Management Zone	Deep	2.876	18.6	20.1	0	19.00	15/10/2025 8:37	1.895	0.981	-	Gauging visit
MW162S	Secondary Management Zone	Shallow	2.838	1.5	4.5	0.0	2.7	1/04/2025 11:17	1.932	0.906	4.22	HydraSleeve install visit. Lugs rusted.
MW162S	Secondary Management Zone	Shallow	2.838	1.5	4.5	0.0	2.7	3/04/2025 12:25	1.911	0.927	4.22	Sampling visit. Lugs rusted.
MW162S	Secondary Management Zone	Shallow	2.838	1.5	4.5	0	3.20	15/10/2025 8:37	1.728	1.110	-	Gauging visit
MW195	Secondary Management Zone	Shallow	1.050	0.8	3.8	0.0	2.3	31/03/2025 10:40	0.020	1.030	3.82	HydraSleeve install visit.
MW195	Secondary Management Zone	Shallow	1.050	0.8	3.8	0.0	2.3	3/04/2025 10:50	0.030	1.020	3.82	Sampling visit.
MW230S	Secondary Management Zone	Shallow	0.939	2.5	4	0.0	2.5	14/04/2025 12:40	0.084	0.855	4.03	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW230S	Secondary Management Zone	Shallow	0.939	2.5	4	0.0	2.5	15/04/2025 8:50	0.162	0.777	4.02	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW230S	Secondary Management Zone	Shallow	0.939	2.5	4	0	3.00	15/10/2025 11:21	0.473	0.466	4.01	Sampling visit
MW247D	Secondary Management Zone	Deep	2.529	18.5	20	0.0	18.8	1/04/2025 11:06	0.740	1.789	20.31	HydraSleeve install visit.
MW247D	Secondary Management Zone	Deep	2.529	18.5	20	0.0	18.8	3/04/2025 12:13	0.800	1.729	20.31	Sampling visit.
MW247D	Secondary Management Zone	Deep	2.529	18.5	20	0	19.30	8/10/2025 10:44	0.925	1.604	20.30	Sampling visit
MW247D	Secondary Management Zone	Deep	2.529	18.5	20	0	19.30	15/10/2025 8:26	0.976	1.553	-	Gauging visit
MW247S	Secondary Management Zone	Shallow	2.468	1.0	4	0.0	2.3	1/04/2025 11:05	0.647	1.821	3.87	HydraSleeve install visit.
MW247S	Secondary Management Zone	Shallow	2.468	1.0	4	0.0	2.3	3/04/2025 12:10	0.709	1.759	3.85	Sampling visit.
MW247S	Secondary Management Zone	Shallow	2.468	1	4	0	2.80	8/10/2025 10:39	0.820	1.648	3.86	Sampling visit. Well casing damaged. Team repaired while on site
MW247S	Secondary Management Zone	Shallow	2.468	1	4	0	2.80	15/10/2025 8:25	0.881	1.587	-	Gauging visit
MW255D	Secondary Management Zone	Deep	1.260	18.5	20	0.0	18.7	31/03/2025 10:22	0.439	0.821	20.26	HydraSleeve install visit.
MW255D	Secondary Management Zone	Deep	1.260	18.5	20	0.0	18.7	3/04/2025 14:15	0.590	0.670	20.26	Sampling visit.
MW255S	Secondary Management Zone	Shallow	1.258	1.0	4	0.0	2.4	31/03/2025 10:29	0.520	0.738	3.96	HydraSleeve install visit. Data logger removed at 10:28, replaced at 10:31
MW255S	Secondary Management Zone	Shallow	1.258	1.0	4	0.0	2.4	3/04/2025 14:22	0.682	0.576	3.96	Sampling visit.
MW256D	Secondary Management Zone	Deep	1.534	18.5	20	0.0	18.7	1/04/2025 11:46	0.422	1.112	20.25	HydraSleeve install visit.
MW256D	Secondary Management Zone	Deep	1.534	18.5	20	0.0	18.7	3/04/2025 12:57	0.464	1.070	20.28	Sampling visit.
MW256D	Secondary Management Zone	Deep	1.534	18.5	20	0	19.20	15/10/2025 8:55	0.846	0.688	-	Gauging visit
MW256S	Secondary Management Zone	Shallow	1.518	1.0	4	0.0	2.4	1/04/2025 11:45	0.440	1.078	3.99	HydraSleeve install visit.

Table T1 - Groundwater Gauging and Observations

Location Code	On-base/Management Zone	Aquifer	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW256S	Secondary Management Zone	Shallow	1.518	1.0	4	0.0	2.4	3/04/2025 13:00	0.483	1.035	3.99	Sampling visit.
MW256S	Secondary Management Zone	Shallow	1.518	1	4	0	2.90	15/10/2025 8:57	0.867	0.651	-	Gauging visit
MW257D	Secondary Management Zone	Deep	1.819	18.5	20	0.0	18.6	1/04/2025 11:56	0.730	1.089	20.19	HydraSleeve install visit.
MW257D	Secondary Management Zone	Deep	1.819	18.5	20	0.0	18.6	3/04/2025 13:14	0.815	1.004	20.19	Sampling visit.
MW257D	Secondary Management Zone	Deep	1.819	18.5	20	0	19.10	15/10/2025 9:04	1.097	0.722	-	Gauging visit
MW257S	Secondary Management Zone	Shallow	1.639	1.0	4	0.0	2.2	1/04/2025 11:55	0.640	0.999	3.77	HydraSleeve install visit.
MW257S	Secondary Management Zone	Shallow	1.639	1.0	4	0.0	2.2	3/04/2025 13:10	0.722	0.917	3.76	Sampling visit.
MW257S	Secondary Management Zone	Shallow	1.639	1	4	0	2.70	15/10/2025 9:04	1.015	0.624	-	Gauging visit
MW260D	Secondary Management Zone	Deep	2.080	18.5	20	0.0	18.7	1/04/2025 12:11	1.045	1.035	20.24	HydraSleeve install visit.
MW260D	Secondary Management Zone	Deep	2.080	18.5	20	0.0	18.7	3/04/2025 13:55	1.105	0.975	20.23	Sampling visit.
MW260D	Secondary Management Zone	Deep	2.08	18.5	20	0	19.20	15/10/2025 9:29	1.467	0.613	-	Gauging visit
MW260S	Secondary Management Zone	Shallow	2.124	1.0	4	0.0	2.2	1/04/2025 12:12	1.099	1.025	3.79	HydraSleeve install visit.
MW260S	Secondary Management Zone	Shallow	2.124	1.0	4	0.0	2.2	3/04/2025 13:52	1.110	1.014	3.79	Sampling visit.
MW260S	Secondary Management Zone	Shallow	2.124	1	4	0	2.70	15/10/2025 9:28	1.280	0.844	-	Gauging visit
MW279S	Secondary Management Zone	Shallow	1.295	0.8	3.8	0.8	3.1	8/04/2025 12:00	0.708	0.587	4.60	HydraSleeve install visit.
MW279S	Secondary Management Zone	Shallow	1.295	0.8	3.8	0.8	3.1	9/04/2025 12:05	0.725	0.570	4.62	Sampling visit.
MW279S	Secondary Management Zone	Shallow	1.295	0.8	3.8	0.79	3.60	8/10/2025 15:06	0.774	0.521	4.63	Sampling visit
MW315D	Secondary Management Zone	Deep	6.160	18.5	20	0.0	18.9	8/04/2025 14:55	1.000	5.160	20.44	HydraSleeve install visit.
MW315D	Secondary Management Zone	Deep	6.160	18.5	20	0.0	18.9	9/04/2025 15:03	1.000	5.160	20.40	Sampling visit.
MW315D	Secondary Management Zone	Deep	6.16	18.5	20	0	19.44	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW315S	Secondary Management Zone	Shallow	6.180	1.0	4	0.0	2.2	8/04/2025 14:56	1.032	5.148	3.75	HydraSleeve install visit.
MW315S	Secondary Management Zone	Shallow	6.180	1.0	4	0.0	2.2	9/04/2025 15:08	1.038	5.142	3.77	Sampling visit.
MW315S	Secondary Management Zone	Shallow	6.18	1	4	0	2.70	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW318D	Secondary Management Zone	Deep	2.630	18.5	20	0.0	18.8	7/04/2025 12:05	0.582	2.048	20.36	HydraSleeve install visit.
MW318D	Secondary Management Zone	Deep	2.630	18.5	20	0.0	18.8	10/04/2025 11:10	0.619	2.011	20.30	Sampling visit.
MW318S	Secondary Management Zone	Shallow	2.670	1.0	4	0.0	2.3	7/04/2025 12:07	0.635	2.035	3.89	HydraSleeve install visit.
MW318S	Secondary Management Zone	Shallow	2.670	1.0	4	0.0	2.3	10/04/2025 11:05	0.674	1.996	3.89	Sampling visit.
MW536	Secondary Management Zone	Shallow	1.864	Unknown	Unknown	0.0	2.4	26/05/2025 9:27	0.942	0.922	3.900	Soft base. HydraSleeve install visit.
MW536	Secondary Management Zone	Shallow	1.864	Unknown	Unknown	0.0	2.1	27/05/2025 8:55	0.963	0.901	3.060	Sampling visit. Soft base.
MW536	Secondary Management Zone	Shallow	1.864	0	0	0	2.40	13/10/2025 12:56	1.654	0.210	3.06	Sampling visit
MW537	Secondary Management Zone	Shallow	1.579	Unknown	Unknown	0.0	1.5	26/05/2025 12:47	0.731	0.848	3.020	Soft base. HydraSleeve install visit.
MW537	Secondary Management Zone	Shallow	1.579	Unknown	Unknown	0.0	1.5	27/05/2025 9:10	0.764	0.815	3.015	Sampling visit. Soft base.
MW537	Secondary Management Zone	Shallow	1.579	0	0	0	1.50	13/10/2025 13:07	1.659	-0.080	3.03	Sampling visit
MW829	Secondary Management Zone	Intermediate	Unknown	Unknown	Unknown	0.0	n/a	7/04/2025 10:39	1.474	Unknown	11.96	Sampling visit.
MW829	Secondary Management Zone	Intermediate	0	0	0	0	n/a	7/10/2025 12:24	0.710	-0.710	11.97	Sampling visit. Good condition, silt observed on probe.
MW897D	Secondary Management Zone	Deep	7.340	17.0	20	0.8	20.0	1/04/2025 10:20	1.963	5.377	21.07	HydraSleeve install visit.
MW897D	Secondary Management Zone	Deep	7.340	17.0	20	0.8	20.0	3/04/2025 11:46	1.991	5.349	21.08	Sampling visit.
MW897D	Secondary Management Zone	Deep	7.34	17	20	0.79	20.00	15/10/2025 12:33	1.840	5.500	-	Gauging visit
MW897S	Secondary Management Zone	Shallow	7.440	3.0	6	0.9	6.0	1/04/2025 10:17	2.035	5.405	7.07	HydraSleeve install visit.
MW897S	Secondary Management Zone	Shallow	7.440	3.0	6	0.9	6.0	3/04/2025 11:40	2.060	5.380	7.08	Sampling visit.
MW897S	Secondary Management Zone	Shallow	7.44	3	6	0.86	6.00	15/10/2025 12:33	1.912	5.528	-	Gauging visit
POT046	Secondary Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	14/04/2025 9:04	n/a	n/a	n/a	Sampling visit.
MW118	Broader Management Zone	Shallow	1.674	4.5	6	0.0	4.4	31/03/2025 10:08	0.132	1.542	5.88	HydraSleeve install visit.
MW118	Broader Management Zone	Shallow	1.674	4.5	6	0.0	4.4	3/04/2025 12:45	0.379	1.295	5.87	Sampling visit.
MW124	Broader Management Zone	Shallow	2.420	6.0	7.5	0.8	n/a	1/04/2025 9:52	1.014	1.406	7.38	Gauge only.
MW124	Broader Management Zone	Shallow	2.42	6	7.5	0.8	n/a	15/10/2025 14:02	1.141	1.279	7.38	Gauge only
MW128D	Broader Management Zone	Deep	0.843	9.3	10.3	0.0	8.9	8/04/2025 12:28	0.230	0.613	10.44	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW128D	Broader Management Zone	Deep	0.843	9.3	10.3	0.0	8.9	9/04/2025 13:00	0.232	0.611	10.43	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW128D	Broader Management Zone	Deep	0.843	9.3	10.3	0	9.40	8/10/2025 14:52	0.185	0.658	10.45	Sampling visit
MW128S	Broader Management Zone	Shallow	0.909	4.7	6.2	0.0	5.1	8/04/2025 12:33	0.940	-0.031	6.16	HydraSleeve install visit.
MW128S	Broader Management Zone	Shallow	0.909	4.7	6.2	0.0	5.1	9/04/2025 13:08	0.947	-0.038	6.17	Sampling visit.
MW128S	Broader Management Zone	Shallow	0.909	4.7	6.2	0	5.10	8/10/2025 14:45	1.040	-0.131	6.16	Sampling visit
MW139	Broader Management Zone	Shallow	1.986	1.0	4	0.0	2.4	14/04/2025 9:48	0.389	1.597	3.92	HydraSleeve install visit.
MW139	Broader Management Zone	Shallow	1.986	1.0	4	0.0	2.4	14/04/2025 13:54	0.392	1.594	3.92	Sampling visit.
MW139	Broader Management Zone	Shallow	1.986	1	4	0	2.90	9/10/2025 15:00	0.359	1.627	3.92	Sampling visit
MW142D	Broader Management Zone	Deep	1.230	18.5	20	0.0	n/a	26/05/2025 9:00	-	n/a	-	Unable to access due to floodwaters.
MW142D	Broader Management Zone	Deep	1.230	18.5	20	0.0	19.5	10/06/2025 10:19	0.412	0.818	21.200	HydraSleeve install visit.
MW142D	Broader Management Zone	Deep	1.230	18.5	20	0.0	19.5	10/06/2025 14:41	0.431	0.799	21.020	Sampling visit.
MW142D	Broader Management Zone	Deep	1.23	18.5	20	0	18.50	13/10/2025 12:42	0.796	0.434	22.00	Sampling visit
MW142S	Broader Management Zone	Shallow	1.230	0.8	3.8	0.0	n/a	26/05/2025 9:00	-	n/a	-	Unable to access due to floodwaters.
MW142S	Broader Management Zone	Shallow	1.230	0.8	3.8	0.0	3.2	10/06/2025 10:21	0.927	0.303	4.730	HydraSleeve install visit.
MW142S	Broader Management Zone	Shallow	1.230	0.8	3.8	0.0	3.2	10/06/2025 14:34	0.964	0.266	4.720	Sampling visit.
MW142S	Broader Management Zone	Shallow	1.23	0.8	3.8	0	1.50	13/10/2025 12:37	1.352	-0.122	4.69	Sampling visit
MW159D	Broader Management Zone	Deep	5.260	18.5	20	0.9	19.7	7/04/2025 12:29	1.771	3.489	21.25	HydraSleeve install visit.
MW159D	Broader Management Zone	Deep	5.260	18.5	20	0.9	19.7	10/04/2025 11:25	1.823	3.437	21.25	Sampling visit.
MW159S	Broader Management Zone	Shallow	4.987	0.7	3.7	0.8	2.9	7/04/2025 12:31	1.520	3.467	4.49	HydraSleeve install visit.
MW159S	Broader Management Zone	Shallow	4.987	0.7	3.7	0.8	2.9	10/04/2025 11:30	1.565	3.422	4.50	Sampling visit.
MW163	Broader Management Zone	Shallow	1.207	0.5	3.5	0.7	2.5	8/04/2025 12:46	0.888	0.319	4.09	HydraSleeve install visit.
MW163	Broader Management Zone	Shallow	1.207	0.5	3.5	0.7	2.5	9/04/2025 12:35	0.900	0.307	4.09	Sampling visit.
MW165	Broader Management Zone	Shallow	1.408	2.5	5	0.0	n/a	9/04/2025 8:30	-	n/a	-	Unable to locate - lost in overgrown grass.
MW165	Broader Management Zone	Shallow	1.408	2.5	5	0.0	n/a	27/05/2025 12:06	-	n/a	-	Unable to locate - suspected destroyed.
MW165	Broader Management Zone	Shallow	1.408	2.5	5	0	n/a	8/10/2025 11:15	n/a	n/a	n/a	Unable to locate. Lost/destroyed
MW231D	Broader Management Zone	Deep	0.571	16.0	17.5	0.0	16.0	16/04/2025 10:30	0.000	0.571	17.59	HydraSleeve install visit. Water at TOC.
MW231D	Broader Management Zone	Deep	0.571	16.0	17.5	0.0	16.0	17/04/2025 12:23	0.000	0.571	17.60	Sampling visit. Water at TOC
MW231D	Broader Management Zone	Deep	0.571	16	17.5	0	16.50	15/10/2025 13:25	0.245	0.326	17.57	Sampling visit
MW231S	Broader Management Zone	Shallow	0.625	1.0	4	0.0	2.5	16/04/2025 10:37	0.574	0.051	4.01	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW231S	Broader Management Zone	Shallow	0.625	1.0	4	0.0	2.5	17/04/2025 12:29	0.308	0.317	4.01	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW231S	Broader Management Zone	Shallow	0.625	1	4	0	3.00	15/10/2025 13:33	0.993	-0.368	4.00	Sampling visit
MW232D	Broader Management Zone	Deep	1.324	18.5	20	0.7	19.5	1/04/2025 8:52	0.625	0.699	21.04	HydraSleeve install visit. Hinge on well monument lid broken.
MW232D	Broader Management Zone	Deep	1.324	18.5	20	0.7	19.5	3/04/2025 8:58	0.634	0.690	21.04	Sampling visit. Hinge on well monument lid broken.
MW232D	Broader Management Zone	Deep	1.324	18.5	20	0.65	18.40	10/10/2025 12:35	0.815	0.509	21.03	Sampling visit

Table T1 - Groundwater Gauging and Observations

Location Code	On-base/Management Zone	Aquifer	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW232D	Broader Management Zone	Deep	1.324	18.5	20	0.65	18.40	15/10/2025 10:10	0.916	0.408	-	Gauging visit
MW232S	Broader Management Zone	Shallow	1.148	1.0	4	0.5	3.1	1/04/2025 8:51	0.580	0.568	4.60	HydraSleeve install visit.
MW232S	Broader Management Zone	Shallow	1.148	1.0	4	0.5	3.1	3/04/2025 8:54	0.595	0.553	4.60	Sampling visit.
MW232S	Broader Management Zone	Shallow	1.148	1	4	0.51	3.60	10/10/2025 12:41	0.870	0.278	4.60	Sampling visit
MW232S	Broader Management Zone	Shallow	1.148	1	4	0.51	3.60	15/10/2025 10:11	1.100	0.048	-	Gauging visit
MW252S	Broader Management Zone	Shallow	1.103	1.0	4	0.0	n/a	7/04/2025 15:03	-	n/a	-	Unable to access - due to well being under flood water.
MW252S	Broader Management Zone	Shallow	1.103	1.0	4	0.0	n/a	26/05/2025 12:06	-	n/a	-	Unable to access due to floodwaters.
MW252S	Broader Management Zone	Shallow	1.103	1	4	0	n/a	8/10/2025 14:55	n/a	n/a	n/a	Unable to access due to well being under flood water
MW266D	Broader Management Zone	Deep	0.267	18.5	20	0.0	n/a	15/04/2025 10:19	-	n/a	-	Unable to access - one bolt rusted/seized..
MW266D	Broader Management Zone	Deep	0.267	18.5	20	0	n/a	16/10/2025 11:54	n/a	n/a	n/a	Unable to access - bolts rusted and rounded
MW266S	Broader Management Zone	Shallow	0.229	1.0	4	0.0	2.4	15/04/2025 10:22	0.031	0.198	3.99	HydraSleeve install.
MW266S	Broader Management Zone	Shallow	0.229	1.0	4	0.0	2.4	15/04/2025 14:35	0.000	0.229	3.99	Water at TOC
MW266S	Broader Management Zone	Shallow	0.229	1	4	0	2.90	16/10/2025 11:46	0.385	-0.156	3.98	Sampling visit. Good condition
MW268D	Broader Management Zone	Deep	3.362	18.5	20	0.0	n/a	1/04/2025 8:34	1.995	1.367	20.10	Gauge only.
MW268D	Broader Management Zone	Deep	3.362	18.5	20	0	n/a	15/10/2025 10:22	1.580	1.782	20.11	Gauge only
MW268S	Broader Management Zone	Shallow	3.232	2.0	5	0.0	n/a	1/04/2025 8:35	1.863	1.369	5.01	Gauge only. Data logger removed
MW268S	Broader Management Zone	Shallow	3.232	2	5	0	n/a	15/10/2025 10:24	1.435	1.797	5.00	Gauge only
MW270D	Broader Management Zone	Deep	1.412	18.5	20	0.0	18.8	15/04/2025 9:43	0.520	0.892	20.32	HydraSleeve install visit.
MW270D	Broader Management Zone	Deep	1.412	18.5	20	0.0	18.8	15/04/2025 14:10	0.520	0.892	20.31	Sampling visit.
MW270D	Broader Management Zone	Deep	1.412	18.5	20	0	19.30	16/10/2025 10:37	0.451	0.961	20.29	Sampling visit
MW270S	Broader Management Zone	Shallow	1.411	2.0	4	0.0	2.3	15/04/2025 9:46	0.504	0.907	3.82	HydraSleeve install visit.
MW270S	Broader Management Zone	Shallow	1.411	2.0	4	0.0	2.3	15/04/2025 14:16	0.518	0.893	3.83	Sampling visit.
MW270S	Broader Management Zone	Shallow	1.411	2	4	0	2.80	16/10/2025 10:42	0.467	0.944	3.82	Sampling visit
MW280S	Broader Management Zone	Shallow	3.831	1.0	4	0.0	2.3	8/04/2025 14:28	0.387	3.444	3.87	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW280S	Broader Management Zone	Shallow	3.831	1.0	4	0.0	2.3	9/04/2025 16:00	0.401	3.430	3.84	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW280S	Broader Management Zone	Shallow	3.831	1	4	0	2.80	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW316D	Broader Management Zone	Deep	1.200	18.5	20	0.0	19.5	8/04/2025 12:48	0.743	0.457	21.09	HydraSleeve install visit.
MW316D	Broader Management Zone	Deep	1.200	18.5	20	0.0	19.5	9/04/2025 12:49	0.900	0.300	21.09	Sampling visit.
MW538	Broader Management Zone	Shallow	1.295	Unknown	Unknown	0.0		26/05/2025 9:00	-	n/a	-	Unable to access due to floodwaters.
MW538	Broader Management Zone	Shallow	1.295	Unknown	Unknown	0.0	3.0	10/06/2025 10:51	1.010	0.285	4.501	HydraSleeve install visit.
MW538	Broader Management Zone	Shallow	1.295	Unknown	Unknown	0.0	3.0	10/06/2025 15:04	1.014	0.281	4.500	Sampling visit.
MW538	Broader Management Zone	Shallow	1.295	0	0	0	3.00	13/10/2025 13:43	-	n/a	4.50	Sampling visit. HydraSleeve blocking depth to water.
MW842	Broader Management Zone	Deep	Unknown	Unknown	Unknown	0.0	n/a	10/04/2025 9:22	1.467	Unknown	18.02	Sampling visit.
MW844	Broader Management Zone	Shallow	Unknown	Unknown	Unknown	0.0	n/a	10/04/2025 9:13	0.409	Unknown	5.99	Sampling visit.
POT085	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	14/04/2025 11:00	n/a	n/a	n/a	Unable to access - private property access not confirmed.
POT085	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	20/10/2025 15:00	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
POT107	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	14/04/2025 9:42	n/a	n/a	n/a	Sampling visit.
POT144	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	3/04/2025 15:00	n/a	n/a	n/a	Sampling visit.
POT236	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	17/04/2025 8:00	n/a	n/a	n/a	Unable to access - private property access not confirmed.
POT236	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	5/11/2025 15:10	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
POT303	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	27/05/2025 10:15	n/a	n/a	n/a	Sampling visit.
POT365	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	26/05/2025 10:05	n/a	n/a	n/a	Sampling visit.
POT365	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	16/10/2025 10:21	n/a	n/a	n/a	Sampling visit
POT382	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	16/04/2025 10:10	n/a	n/a	n/a	Sampling visit.
POT382	Broader Management Zone	Unknown	n/a	n/a	n/a	n/a	n/a	15/10/2025 13:13	n/a	n/a	n/a	Sampling visit
MW137	Outside Broader Management Zone	Shallow	2.820	0.5	3.5	0.0	1.9	8/04/2025 13:35	0.802	2.018	3.45	HydraSleeve install.
MW137	Outside Broader Management Zone	Shallow	2.820	0.5	3.5	0.0	1.9	9/04/2025 14:26	0.812	2.008	3.43	Sampling visit.
MW137	Outside Broader Management Zone	Shallow	2.82	0.5	3.5	0	2.40	10/10/2025 11:41	0.864	1.956	3.33	Sampling visit
MW241D	Outside Broader Management Zone	Deep	5.449	18.5	20	0.0	18.8	7/04/2025 15:44	1.350	4.099	20.30	HydraSleeve install visit.
MW241D	Outside Broader Management Zone	Deep	5.449	18.5	20	0.0	18.8	9/04/2025 16:28	1.377	4.072	20.21	Sampling visit.
MW241D	Outside Broader Management Zone	Deep	5.449	18.5	20	0	19.30	8/10/2025 12:42	0.705	4.744	20.19	Sampling visit
MW241S	Outside Broader Management Zone	Shallow	5.559	1.0	4	0.0	2.4	7/04/2025 15:43	1.399	4.160	3.95	HydraSleeve install visit.
MW241S	Outside Broader Management Zone	Shallow	5.559	1.0	4	0.0	2.4	9/04/2025 16:21	1.344	4.215	3.98	Sampling visit.
MW241S	Outside Broader Management Zone	Shallow	5.559	1	4	0	2.90	8/10/2025 12:35	0.782	4.777	3.87	Sampling visit
MW262D	Outside Broader Management Zone	Deep	Unknown	18.5	20	0.0	19.3	26/05/2025 14:35	0.268	n/a	20.287	HydraSleeve install visit.
MW262D	Outside Broader Management Zone	Deep	Unknown	18.5	20	0.0	n/a	27/05/2025 12:15	-	n/a	-	Unable to access - wells under water from high tide.
MW262D	Outside Broader Management Zone	Deep	Unknown	18.5	20	0.0	19.3	10/06/2025 13:49	0.307	n/a	20.280	Sampling visit.
MW262S	Outside Broader Management Zone	Shallow	Unknown	3.0	5	0.0	2.9	26/05/2025 14:43	0.287	n/a	4.430	HydraSleeve install visit.
MW262S	Outside Broader Management Zone	Shallow	Unknown	3.0	5	0.0	n/a	27/05/2025 12:15	-	n/a	-	Unable to access - wells under water from high tide.
MW262S	Outside Broader Management Zone	Shallow	Unknown	3.0	5	0.0	2.9	10/06/2025 14:03	0.376	n/a	4.415	Sampling visit.
MW262S	Outside Broader Management Zone	Shallow	Unknown	3	5	0	2.90	14/10/2025 11:15	0.505	n/a	4.43	Sampling visit
MW264D	Outside Broader Management Zone	Deep	9.347	18.5	20	0.0	18.5	9/04/2025 9:39	0.684	8.663	20.07	HydraSleeve install visit.
MW264D	Outside Broader Management Zone	Deep	9.347	18.5	20	0.0	18.5	10/04/2025 8:49	0.692	8.655	20.07	Sampling visit.
MW264D	Outside Broader Management Zone	Deep	9.347	18.5	20	0	19.00	7/10/2025 10:46	0.045	9.302	20.02	Sampling visit
MW264S	Outside Broader Management Zone	Shallow	9.492	1.0	4	0.0	1.7	9/04/2025 9:42	0.840	8.652	3.20	HydraSleeve install visit. Encountered blockage at 3.2m. Unable to clear. Suspected root intrusion.
MW264S	Outside Broader Management Zone	Shallow	9.492	1.0	4	0.0	1.7	10/04/2025 8:54	0.855	8.637	3.22	Sampling visit. Encountered blockage at 3.2m. Unable to clear. Suspected root intrusion.
MW264S	Outside Broader Management Zone	Shallow	9.492	1	4	0	2.20	7/10/2025 10:29	0.139	9.353	3.21	Sampling visit. Well operational however roots present on IP, possible root blockage.

Notes
mAHD meters Australian Height Datum
mbgl meters below ground level
mbTOC meters below Top of Casing
n/a Not applicable
- Not measured

Table T2 - Groundwater Quality Parameters and Observations

Location Code	On-base/Management Zone	Sampled Date	Sample Comment	Sampling Method	Water Quality Parameters					
					Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
					mg/L	°C	µS/cm	pH Units	mV	mV
MW106D	On-base	3/04/2025	Brown, medium turbidity, sulphurous odour, no sheen	HydraSleeve	1.96	21.0	133.0	5.55	34.4	240.2
MW106D	On-base	8/10/2025	Clear, no turbidity, slight sulphurous odour, no sheen	HydraSleeve	1.77	17.9	188.5	5.42	96.6	302.4
MW106S	On-base	3/04/2025	Brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.68	21.6	76.5	5.78	24.4	230.2
MW106S	On-base	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.99	16.1	173.7	5.49	173.8	379.6
MW108D	On-base	4/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.88	20.6	249.0	6.66	-85.0	120.8
MW108D	On-base	10/10/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	0.87	16.4	228.2	6.52	-51.1	154.7
MW108S	On-base	4/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.15	22.0	111.3	4.91	75.6	281.4
MW108S	On-base	9/10/2025	Light brown, no turbidity, no odour, no sheen	HydraSleeve	1.64	15.1	123.4	4.19	-59.7	146.1
MW109D	On-base	4/04/2025	Yellow, no turbidity, slight sulphurous odour, no sheen	HydraSleeve	2.95	20.5	165.7	6.68	-73.0	132.8
MW109D	On-base	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.32	17.2	99.3	6.27	-144.4	61.4
MW134D	On-base	11/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.09	19.5	157.6	4.73	194.1	399.9
MW134I	On-base	11/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.94	20.0	159.2	4.41	211.0	416.8
MW155	On-base	4/04/2025	Light yellow, no turbidity, slight organic odour, no sheen	HydraSleeve	3.09	23.3	199.2	5.67	193.6	399.4
MW166	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.14	22.9	54.3	4.69	219.5	425.3
MW166	On-base	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.44	14.2	55.1	4.96	166.7	372.5
MW167	On-base	4/04/2025	Clear, low turbidity, no odour, no sheen	HydraSleeve	4.22	23.0	75.5	5.05	231.7	437.5
MW167	On-base	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.60	14.4	67.9	5.48	88.8	294.6
MW168	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.85	23.6	81.8	5.08	222.2	428.0
MW168	On-base	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.04	15.8	57.1	5.33	120.2	326.0
MW169D	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.86	21.2	161.3	6.35	91.5	297.3
MW169D	On-base	10/10/2025	Clear, no turbidity, no odour, no sheen. Black suspended solids	HydraSleeve	1.85	17.5	81.7	6.30	64.9	270.7
MW169S	On-base	4/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	4.74	23.4	101.7	5.65	146.0	351.8
MW169S	On-base	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.12	16.3	87.8	5.44	131.8	337.6
MW171D	On-base	4/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	1.95	22.7	170.2	6.66	-159.5	46.3
MW171S	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.52	23.4	103.0	4.56	177.6	383.4
MW172	On-base	1/04/2025	Brown, medium turbidity, sulphurous odour, no sheen	HydraSleeve	1.25	23.2	253.8	4.98	-35.5	170.3
MW172	On-base	9/10/2025	Brown, medium turbidity, no odour, no sheen	HydraSleeve	1.41	14.9	151.9	5.28	-120.2	85.6
MW175D	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.45	21.6	167.9	6.29	21.7	227.5
MW175D	On-base	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.96	16.6	183.3	6.37	-79.6	126.2
MW179D	On-base	1/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.93	22.7	207.1	6.51	-32.7	173.1
MW179S	On-base	1/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.54	24.2	190.5	5.16	-117.6	88.2
MW196	On-base	11/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	4.36	22.6	92.0	5.25	54.0	259.8
MW198	On-base	11/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	4.02	22.6	153.8	5.81	87.5	293.3
MW200	On-base	11/04/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.06	22.5	51.4	4.79	-0.8	205.0
MW201D	On-base	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.17	21.6	73.9	5.82	124.3	330.1
MW201S	On-base	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.53	22.1	126.1	5.06	160.6	366.4
MW202D	On-base	1/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.05	22.1	218.9	4.46	195.0	400.8
MW202S	On-base	1/04/2025	Light brown, low turbidity, no odour, no sheen	HydraSleeve	2.37	24.3	225.8	6.04	149.5	355.3
MW208	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.72	22.6	127.9	5.61	188.1	393.9
MW210D	On-base	4/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.92	22.2	53.3	6.17	175.5	381.3
MW210S	On-base	4/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.77	23.6	269.6	5.70	182.9	388.7
MW240D	On-base	16/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.38	19.7	191.4	6.23	28.3	234.1
MW240D	On-base	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.56	15.1	75.0	5.10	189.0	394.8
MW245D	On-base	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.28	20.4	186.6	5.81	2.7	208.5
MW245S	On-base	11/04/2025	Dark yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.90	22.1	139.9	4.11	50.9	256.7
MW281S	On-base	16/04/2025	Light yellow, no turbidity, no sheen	HydraSleeve	4.98	20.4	170.0	4.96	-69.2	136.6
MW281S	On-base	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.00	13.6	133.9	4.67	-98.6	107.2
MW282S	On-base	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.82	20.2	152.8	5.05	-57.0	148.8
MW282S	On-base	9/10/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	0.80	13.5	80.1	4.18	-60.0	145.8
MW304	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.91	22.4	253.7	5.22	203.3	409.1
MW317D	On-base	11/04/2025	Grey, low turbidity, no odour, no sheen	HydraSleeve	2.84	20.0	180.9	5.14	-22.2	183.6
MW317S	On-base	11/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.67	22.0	153.2	4.54	-51.0	154.8
MW329	On-base	16/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.88	20.0	175.9	4.82	-53.0	152.8
MW329	On-base	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.48	13.2	143.4	4.31	1.5	349.2
MW340D	On-base	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.75	18.6	104.3	5.84	-137.3	68.5
MW340D	On-base	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.97	15.2	99.8	5.73	-132.4	73.4
MW340S	On-base	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.81	19.7	147.3	4.42	-65.8	140.0
MW340S	On-base	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.77	13.4	160.5	4.42	-83.2	122.6
MW342D	On-base	16/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	5.01	19.0	205.7	6.25	-55.3	150.5
MW342D	On-base	9/10/2025	Light grey, low turbidity, slight sulphurous odour, no sheen	HydraSleeve	1.17	16.9	238.8	6.49	-92.7	113.1
MW344D	On-base	16/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.88	20.5	192.8	6.20	-75.3	130.5
MW344D	On-base	9/10/2025	Light grey, no turbidity, slight sulphurous odour, no sheen	HydraSleeve	1.43	15.8	238.9	6.88	-134.7	71.1
MW344S	On-base	16/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.77	20.7	113.5	5.47	-47.5	158.3
MW344S	On-base	9/10/2025	Clear, no turbidity, no odour, no sheen. White suspended solids	HydraSleeve	1.35	16.1	80.4	5.15	-79.9	125.9
MW354S	On-base	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.98	19.9	149.1	4.40	-31.4	174.4
MW354S	On-base	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.90	14.1	151.3	4.88	-92.4	113.4
MW441	On-base	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.45	21.2	169.0	5.78	194.5	400.3
MW466	On-base	4/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	4.88	21.8	128.6	4.97	-5.1	200.7
MW466	On-base	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.21	15.1	154.5	5.13	-89.1	116.7

Table T2 - Groundwater Quality Parameters and Observations

Location Code	On-base/Management Zone	Sampled Date	Sample Comment	Sampling Method	Water Quality Parameters					
					Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
					mg/L	°C	µS/cm	pH Units	mV	mV
MW468	On-base	4/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	3.35	21.2	135.0	5.34	-58.6	147.2
MW468	On-base	9/10/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.49	14.1	119.0	5.29	-106.7	99.1
MW886	On-base	3/04/2025	Brown, medium turbidity, no odour, no sheen	HydraSleeve	1.73	24.6	136.3	5.28	201.7	407.5
MW126D	Primary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	5.57	19.6	174.5	6.67	-1.7	204.1
MW126D	Primary Management Zone	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.29	15.9	89.0	6.35	27.1	232.9
MW126S	Primary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	6.04	20.8	279.5	6.54	-46.1	159.7
MW126S	Primary Management Zone	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.79	15.5	219.7	6.10	12.4	218.2
MW177	Primary Management Zone	20/10/2025	Brown, high turbidity, organic odour, no sheen	Bailer	2.61	15.6	138.7	5.61	-62.2	143.6
MW178	Primary Management Zone	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.50	21.5	450.7	5.56	-38.7	167.1
MW178	Primary Management Zone	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.45	17.1	61.6	5.48	-111.2	94.6
MW188D	Primary Management Zone	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.28	20.1	166.8	6.90	-28.4	177.4
MW188S	Primary Management Zone	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.29	22.0	686.0	6.93	-89.5	116.3
MW220S	Primary Management Zone	20/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.98	19.8	2,245.0	5.92	-119.4	86.4
MW271D	Primary Management Zone	14/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.09	19.3	208.2	6.04	33.1	238.9
MW271D	Primary Management Zone	13/10/2025	Grey, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.18	14.4	353.9	6.55	-67.7	138.1
MW271S	Primary Management Zone	14/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.56	19.6	368.0	5.42	-9.8	196.0
MW271S	Primary Management Zone	13/10/2025	Clear, no turbidity, sulphurous odour, no sheen. Black suspended solids	HydraSleeve	2.23	14.8	585.0	5.28	-124.3	81.5
MW278D	Primary Management Zone	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	4.01	19.5	425.8	6.58	-108.5	97.3
MW278D	Primary Management Zone	10/10/2025	Clear, no turbidity, sulph odour, no sheen	HydraSleeve	1.08	17.4	138.2	6.26	-154.8	51.0
MW278S	Primary Management Zone	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	4.02	21.2	193.7	6.52	-73.7	132.1
MW278S	Primary Management Zone	10/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	0.66	17.0	280.0	6.09	-188.9	16.9
MW731D	Primary Management Zone	9/04/2025	Grey, high turbidity, no odour, no sheen	HydraSleeve	2.58	20.3	571.0	6.48	-58.6	147.2
MW731D	Primary Management Zone	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.55	16.3	3,547.0	6.24	-72.5	133.3
MW731S	Primary Management Zone	9/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.33	20.7	188.8	5.84	-82.2	123.6
MW731S	Primary Management Zone	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.04	17.6	176.4	5.66	-135.4	70.4
MW107D	Secondary Management Zone	9/04/2025	Light brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	4.25	18.7	115.1	5.46	-25.6	180.2
MW107S	Secondary Management Zone	9/04/2025	Light brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	2.65	19.4	139.8	4.79	-27.5	178.3
MW121	Secondary Management Zone	3/04/2025	Clear, low turbidity, no odour, no sheen	HydraSleeve	3.70	22.6	127.6	6.22	-50.6	155.2
MW122	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.05	22.4	449.2	5.42	77.3	283.1
MW123	Secondary Management Zone	3/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.31	23.1	240.3	6.64	12.7	218.5
MW125D	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	6.91	21.3	557.0	6.43	-110.8	95.0
MW125D	Secondary Management Zone	13/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.18	16.7	888.0	6.26	-191.9	13.9
MW125S	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.87	22.4	437.6	5.93	-33.5	172.3
MW125S	Secondary Management Zone	10/10/2025	Brown, no turbidity, organic odour, no sheen	HydraSleeve	1.27	17.8	448.3	5.89	-69.6	136.2
MW130D	Secondary Management Zone	10/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	5.80	19.2	111.1	4.85	-70.5	135.3
MW130S	Secondary Management Zone	10/04/2025	Light orange, no turbidity, no odour, no sheen	HydraSleeve	3.50	19.8	169.8	4.31	-32.5	173.3
MW132D	Secondary Management Zone	10/04/2025	Light brown, no turbidity, no odour, no sheen	HydraSleeve	5.10	20.6	176.7	5.24	-0.7	205.1
MW132D	Secondary Management Zone	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.85	15.5	164.0	5.25	-87.1	118.7
MW132I	Secondary Management Zone	10/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.84	19.7	155.3	4.17	22.8	228.6
MW132I	Secondary Management Zone	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.75	15.3	121.6	4.43	9.6	215.4
MW144	Secondary Management Zone	27/05/2025	Brown, medium turbidity, organic odour, no sheen.	HydraSleeve	2.30	17.6	2,100.0	6.56	-49.5	156.3
MW144	Secondary Management Zone	13/10/2025	Brown, medium turbidity, organic odour, no sheen	HydraSleeve	0.16	18.7	5,210.0	8.18	-282.1	-76.3
MW146AD	Secondary Management Zone	3/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.95	20.9	275.5	6.64	-150.3	55.5
MW146AD	Secondary Management Zone	10/10/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.11	18.7	89.5	6.48	-47.2	158.6
MW146S	Secondary Management Zone	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	3.49	22.8	362.1	6.19	48.3	254.1
MW146S	Secondary Management Zone	10/10/2025	Brown, medium turbidity, slight organic odour, no sheen	HydraSleeve	2.12	15.6	232.4	6.17	-0.9	204.9
MW147D	Secondary Management Zone	11/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.32	21.5	30,405.0	6.14	14.4	220.2
MW147S	Secondary Management Zone	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.58	22.6	22,348.0	6.85	-101.2	104.6
MW150D	Secondary Management Zone	3/04/2025	Clear, low turbidity, slight sulphurous odour, no sheen	HydraSleeve	3.25	20.8	143.2	5.81	3.5	209.3
MW150S	Secondary Management Zone	3/04/2025	Clear, low turbidity, no odour, no sheen. White suspended organics	HydraSleeve	1.73	22.6	312.9	6.52	90.9	296.7
MW160	Secondary Management Zone	10/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	5.16	21.0	196.6	4.72	-74.0	131.8
MW160	Secondary Management Zone	8/10/2025	Yellow, no turbidity, organic odour, no sheen	HydraSleeve	1.53	15.0	124.5	4.49	57.2	263.0
MW161D	Secondary Management Zone	10/04/2025	Light grey, no turbidity, no odour, no sheen	HydraSleeve	2.61	22.7	237.1	6.05	48.9	254.7
MW161S	Secondary Management Zone	10/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.98	24.4	175.2	5.95	-166.3	39.5
MW162D	Secondary Management Zone	27/05/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.18	19.2	133.2	6.22	41.6	247.4
MW162S	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	6.35	23.8	134.6	5.91	93.5	299.3
MW195	Secondary Management Zone	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.30	21.0	577.0	6.83	-51.6	154.2
MW230S	Secondary Management Zone	15/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.12	20.7	386.9	6.00	31.6	237.4
MW230S	Secondary Management Zone	15/10/2025	Light yellow, low turbidity, organic odour, no sheen	HydraSleeve	1.80	16.5	514.0	5.70	-13.1	192.7
MW247D	Secondary Management Zone	3/04/2025	Light brown, medium turbidity, no odour, no sheen	HydraSleeve	2.56	20.2	149.1	5.96	70.6	276.4
MW247D	Secondary Management Zone	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.24	16.8	61.5	4.34	39.4	245.2
MW247S	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.05	23.5	230.0	4.72	108.6	314.4
MW247S	Secondary Management Zone	8/10/2025	Clear, no turbidity, no odour, no sheen. Black suspended solids	HydraSleeve	1.56	18.3	106.0	4.84	-87.6	118.2
MW255D	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.44	22.0	28,758.0	6.81	-101.4	104.4
MW255S	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.50	24.9	1,626.0	6.20	-10.7	195.1
MW256D	Secondary Management Zone	3/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.56	20.1	134.9	6.25	-145.3	60.5
MW256S	Secondary Management Zone	3/04/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.27	22.4	140.6	4.38	-15.3	190.5
MW257D	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.56	20.4	40.6	6.16	-60.8	145.0
MW257S	Secondary Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.88	23.3	69.4	5.37	44.4	250.2

Table T2 - Groundwater Quality Parameters and Observations

Location Code	On-base/Management Zone	Sampled Date	Sample Comment	Sampling Method	Water Quality Parameters					
					Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
					mg/L	°C	µS/cm	pH Units	mV	mV
MW260D	Secondary Management Zone	3/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.06	20.8	22,946.0	5.42	46.6	252.4
MW260S	Secondary Management Zone	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	3.06	23.5	10,653.0	6.41	-28.7	177.1
MW279S	Secondary Management Zone	9/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	4.11	23.5	4,343.0	6.88	-45.6	160.2
MW279S	Secondary Management Zone	8/10/2025	Grey, medium turbidity, no odour, no sheen. Black sediment in base of hydrasleeve	HydraSleeve	1.24	14.1	943.0	6.64	-170.4	35.4
MW315D	Secondary Management Zone	9/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.65	19.5	97.6	5.41	10.0	215.8
MW315S	Secondary Management Zone	9/04/2025	Light brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.62	20.5	151.3	4.61	-58.0	147.8
MW318D	Secondary Management Zone	10/04/2025	Yellow, low turbidity, no odour, no sheen	HydraSleeve	2.44	19.9	305.1	6.04	-109.3	96.5
MW318S	Secondary Management Zone	10/04/2025	Brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	2.94	22.2	135.8	4.72	-144.8	61.0
MW536	Secondary Management Zone	27/05/2025	Grey, high turbidity, organic odour, no sheen	HydraSleeve	6.60	18.2	10,075.0	6.21	114.4	320.2
MW536	Secondary Management Zone	13/10/2025	Brown, low turbidity, organic odour, no sheen	HydraSleeve	0.79	14.0	23,264.0	6.60	-154.9	50.9
MW537	Secondary Management Zone	27/05/2025	Light brown, medium turbidity, organic odour, no sheen.	HydraSleeve	5.47	18.2	12,489.0	6.34	-118.2	87.6
MW537	Secondary Management Zone	13/10/2025	Black, high turbidity, organic odour, no sheen	HydraSleeve	0.33	15.4	7,058.0	6.66	-228.8	-23.0
MW829	Secondary Management Zone	7/04/2025	Clear, no turbidity, no odour, no sheen	Bailer	4.05	24.5	202.5	4.55	232.6	438.4
MW829	Secondary Management Zone	7/10/2025	Orange, high turbidity, no odour, no sheen	HydraSleeve	3.24	16.3	193.1	5.52	131.3	337.1
MW897D	Secondary Management Zone	3/04/2025	Light brown, low turbidity, slight organic odour, no sheen	HydraSleeve	4.04	20.7	603.0	7.01	-120.2	85.6
MW897S	Secondary Management Zone	3/04/2025	Orange, no turbidity, no odour, no sheen	HydraSleeve	2.32	21.5	125.5	5.10	143.1	348.9
POT046	Secondary Management Zone	14/04/2025	Clear colour, no turbidity, sulphurous odour, no sheen	Grab - from tap	3.02	20.9	176.8	5.55	-64.7	141.1
MW118	Broader Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.79	23.3	122.4	5.36	-36.4	169.4
MW128D	Broader Management Zone	9/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.62	20.5	2,317.0	7.82	-137.3	68.5
MW128D	Broader Management Zone	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.28	17.1	1,202.0	7.68	-43.3	162.5
MW128S	Broader Management Zone	9/04/2025	Grey, low turbidity, no odour, no sheen	HydraSleeve	2.48	19.7	6,757.0	7.35	-90.7	115.1
MW128S	Broader Management Zone	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.91	20.7	2,330.0	7.03	3.2	209.0
MW139	Broader Management Zone	14/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.97	24.2	312.4	5.05	28.9	234.7
MW139	Broader Management Zone	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.78	17.2	221.3	4.88	-93.3	112.5
MW142D	Broader Management Zone	10/06/2025	Grey, low turbidity, no odour, no sheen	HydraSleeve	2.12	17.9	27,717.0	6.46	-42.2	163.6
MW142D	Broader Management Zone	13/10/2025	Clear, no turbidity, organic odour, no sheen	HydraSleeve	0.95	15.1	27,784.0	6.41	-117.1	88.7
MW142S	Broader Management Zone	10/06/2025	Clear, low turbidity, slight organic odour, no sheen	HydraSleeve	2.58	17.7	31,623.0	6.95	-87.9	117.9
MW142S	Broader Management Zone	13/10/2025	Clear, no turbidity, organic odour, no sheen	HydraSleeve	0.96	15.3	29,105.0	6.85	-125.6	80.2
MW159D	Broader Management Zone	10/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.32	20.6	378.6	6.57	-51.6	154.2
MW159S	Broader Management Zone	10/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.52	22.6	155.9	4.89	26.0	231.8
MW163	Broader Management Zone	9/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.11	23.0	9,164.0	6.75	-30.4	175.4
MW231D	Broader Management Zone	17/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	8.13	21.8	20,555.0	6.79	-207.5	-1.7
MW231D	Broader Management Zone	15/10/2025	Light grey, medium turbidity, sulphurous odour, no sheen	HydraSleeve	0.35	18.2	15,352.0	6.89	-179.9	25.9
MW231S	Broader Management Zone	17/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.35	22.9	20,294.0	6.68	-138.0	67.8
MW231S	Broader Management Zone	15/10/2025	Light brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	0.76	16.1	16,495.0	6.80	-94.4	111.4
MW232D	Broader Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.01	19.7	14,652.0	7.44	-60.1	145.7
MW232D	Broader Management Zone	10/10/2025	Clear, no turbidity, slight sulp odour, no sheen	HydraSleeve	0.89	16.8	14,771.0	7.24	-128.4	77.4
MW232S	Broader Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.09	20.8	1,528.0	7.08	94.4	300.2
MW232S	Broader Management Zone	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.47	15.2	1,979.0	7.53	-83.8	122.0
MW266S	Broader Management Zone	15/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.33	22.8	41,842.0	6.74	-86.7	119.1
MW266S	Broader Management Zone	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	HydraSleeve	0.90	19.1	42,300.0	6.72	-115.2	90.6
MW270D	Broader Management Zone	15/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.45	20.8	178.7	6.69	-104.7	101.1
MW270D	Broader Management Zone	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	HydraSleeve	1.06	16.8	97.0	6.40	-120.6	85.2
MW270S	Broader Management Zone	15/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.76	21.6	292.8	6.52	-124.7	81.1
MW270S	Broader Management Zone	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	HydraSleeve	0.97	16.2	570.0	6.36	-127.1	78.7
MW280S	Broader Management Zone	9/04/2025	Brown, high turbidity, sulphurous odour, no sheen	HydraSleeve	4.92	20.4	123.8	4.84	-68.6	137.2
MW316D	Broader Management Zone	9/04/2025	Brown, low turbidity, no odour, no sheen	HydraSleeve	1.82	20.4	24,014.0	6.73	-53.7	152.1
MW538	Broader Management Zone	10/06/2025	Clear, no turbidity, no odour, no sheen.	HydraSleeve	2.40	17.5	26,170.0	6.67	-99.3	106.5
MW538	Broader Management Zone	13/10/2025	Black, medium turbidity, organic odour, no sheen	HydraSleeve	2.25	16.2	12,984.0	6.45	-113.0	92.8
MW842	Broader Management Zone	10/04/2025	Clear, no turbidity, sulphurous odour, no sheen	Peristaltic pump	3.54	22.1	220.2	5.74	-99.0	106.8
MW844	Broader Management Zone	10/04/2025	Clear, no turbidity, sulphurous odour, no sheen	Peristaltic pump	2.84	22.7	89.9	5.10	-54.9	150.9
POT107	Broader Management Zone	14/04/2025	Light yellow colour, no turbidity, sulphurous odour, no sheen	Grab - from tap	2.49	22.4	343.6	6.12	-106.6	99.2
POT144	Broader Management Zone	3/04/2025	Clear, no turbidity, no odour, no sheen	Grab - from tap	2.85	26.9	144.0	6.50	-34.8	171.0
POT303	Broader Management Zone	27/05/2025	Clear, no turbidity, sulphurous odour, no sheen.	Grab - from tap	1.71	18.8	395.4	7.01	-77.5	128.3
POT365	Broader Management Zone	26/05/2025	Light yellow, no turbidity, no odour, no sheen	Grab - from tap	3.93	17.7	563.0	6.57	209.3	415.1
POT365	Broader Management Zone	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	Grab - from tap	2.69	16.9	481.6	6.79	109.8	315.6
POT382	Broader Management Zone	16/04/2025	Clear, no turbidity, no odour, no sheen	Grab - from tap	2.29	23.1	2,210.0	6.75	-17.2	188.6
POT382	Broader Management Zone	15/10/2025	Clear, no turbidity, no odour, no sheen	Grab - from tap	0.71	25.1	2,618.0	7.59	-57.9	147.9
MW137	Outside Broader Management Zone	9/04/2025	Yellow, low turbidity, sulfurous odour, no sheen	HydraSleeve	2.86	21.4	443.1	4.58	-11.4	194.4
MW137	Outside Broader Management Zone	10/10/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.17	14.7	167.5	4.74	-51.5	154.3
MW241D	Outside Broader Management Zone	9/04/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.34	19.4	93.5	5.82	-20.2	185.6
MW241D	Outside Broader Management Zone	8/10/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	1.47	20.0	103.2	5.72	-114.5	91.3
MW241S	Outside Broader Management Zone	9/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.44	22.0	77.7	4.94	-48.3	157.5
MW241S	Outside Broader Management Zone	8/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.99	20.0	82.4	4.83	-90.3	115.5
MW262D	Outside Broader Management Zone	10/06/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.50	17.0	39,447.0	6.48	-137.4	68.4
MW262S	Outside Broader Management Zone	10/06/2025	Brown, low turbidity, organic odour, no sheen	HydraSleeve	0.69	17.4	7,087.0	6.84	-148.6	57.2
MW262S	Outside Broader Management Zone	14/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.14	16.4	3,586.0	5.82	-101.9	103.9
MW264D	Outside Broader Management Zone	10/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.24	18.9	221.7	6.25	-8.7	197.1
MW264D	Outside Broader Management Zone	7/10/2025	Clear, low turbidity, no odour, no sheen	HydraSleeve	1.68	15.2	245.1	6.14	-106.4	99.4

Table T2 - Groundwater Quality Parameters and Observations

Location Code	On-base/Management Zone	Sampled Date	Sample Comment	Sampling Method	Water Quality Parameters					
					Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
MW264S	Outside Broader Management Zone	10/04/2025	Brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	mg/L	°C	µS/cm	pH Units	mV	mV
MW264S	Outside Broader Management Zone	7/10/2025	Clear, no turbidity, no odour, no sheen. White suspended solids	HydraSleeve	3.38	20.9	171.4	5.14	-42.5	163.3
					1.44	14.5	210.5	4.31	-115.8	90.0

Notes
Corrected field Oxidation-Reduction Potential measurement Eh = Er + 205.8
mg/L milligrams per Litre
°C degrees Celsius
µS/cm microSiemens per centimetre
mV milliVolts
n/a not applicable
- not measured

Table T3 - Surface Water Quality Parameters and Observations

Location Code	On-base/ Management Zone	Sampled/Visit Date	Location Comments	Sample Depth From (m)	Sample Depth To (m)	Sample Comment	Water Quality Parameters					
							Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
							mg/L	°C	µS/cm	pH_Units	mV	mV
SW047	On-base	2/04/2025	Drain. 5m wide, 1m deep. No flow observed.	0.40	0.50	Clear, no turbidity, no odour, no sheen.	3.40	21.8	155.4	6.07	87.3	293.1
SW047	On-base	9/10/2025	Creek. 5m wide, 1m deep, no flow	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	4.50	18.7	135.6	5.83	23.1	228.9
SW048	On-base	2/04/2025	Drain. 6m wide, 0.3m deep. No flow observed. Biosheen on water surface.	0.05	0.15	Clear, no turbidity, no odour, no sheen.	6.66	21.6	86.4	5.31	162.4	368.2
SW048	On-base	9/10/2025	Drain. 6m wide, 0.5m deep, no flow.	0.15	0.25	Clear colour, no turbidity, no odour, no sheen.	6.38	19.0	91.4	5.34	59.6	265.4
SW055	On-base	2/04/2025	Drain. 3m wide, 0.5m deep. Flow observed.	0.15	0.25	Clear, no turbidity, no odour, no sheen.	4.16	20.9	111.3	6.05	109.1	314.9
SW055	On-base	9/10/2025	Creek. 3m wide, 0.5m deep. Flow observed	0.20	0.30	Light yellow, no turbidity, no odour, no sheen	2.62	17.6	116.4	5.88	-64.9	140.9
SW108	On-base	2/04/2025	Lake Cochran. 100m wide, 1.5m deep. No flow observed.	0.65	0.75	Clear, no turbidity, no odour, no sheen.	3.73	21.7	105.8	6.40	106.4	312.2
SW108	On-base	9/10/2025	Lake. 200m wide, 1m deep, no flow	0.40	0.50	Light yellow, low turbidity, no odour, no sheen.	7.08	19.8	117.0	6.52	-21.7	184.1
SW110	On-base	2/04/2025	Lake Cochran. 50m wide, 2m deep. Flow observed.	0.90	1.00	Clear, no turbidity, no odour, no sheen.	5.47	21.8	124.8	6.67	121.5	327.3
SW110	On-base	9/10/2025	Creek. 4m wide, 0.5m deep, flow observed.	0.15	0.25	Clear colour, no turbidity, no odour, no sheen.	6.10	19.6	113.6	6.59	157.6	363.4
SW582	On-base	16/04/2025	Closed drain (manhole). 4m to SWL, approximately 0.3m deep. Flow observed	0.10	0.20	Clear, no turbidity, sulphurous odour, no sheen.	7.22	21.4	155.5	5.72	16.8	222.6
SW582	On-base	10/10/2025	Manhole cover. 1m wide, 0.2m deep. Depth to water 5m. Flow observed	0.05	0.10	Light yellow, no turbidity, no odour, no sheen. Orange suspended solids.	4.16	17.4	129.1	5.63	5.7	211.5
SW588	On-base	2/04/2025	Closed drain (stormwater grate). 1.5m long, 1m wide, 0.5m deep. No flow observed.	0.10	0.20	Clear, no turbidity, no odour, no sheen.	1.39	21.9	159.2	6.34	127.4	333.2
SW588	On-base	8/10/2025	Drain. 1m long, 0.75m wide, 0.4m deep. No flow observed	0.20	0.30	Light brown, no turbidity, no odour, no sheen	1.07	17.0	168.8	6.19	-119.4	86.4
SW060	Primary Management Zone	2/04/2025	Creek. 4m wide, 1.5m deep. No flow observed.	0.65	0.75	Brown, no turbidity, no odour, no sheen.	2.32	18.3	333.4	5.46	99.6	305.4
SW060	Primary Management Zone	7/10/2025	Creek. 4m wide, 1m deep, no flow.	0.40	0.50	Brown, low turbidity, no odour, no sheen.	4.35	19.2	194.1	5.77	139.5	345.3
SW333	Primary Management Zone	16/04/2025	Creek. 5m wide, 1m deep. No flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	2.93	20.3	614.0	6.12	18.3	224.1
SW333	Primary Management Zone	13/10/2025	Creek. 3m wide, 2m deep. Flow observed	0.40	0.50	Clear, no turbidity, no odour, no sheen	1.55	17.0	197.0	5.97	3.0	208.8
SW001	Secondary Management Zone	2/04/2025	Creek/drain. 5m wide, 1m deep. No flow observed.	0.40	0.50	Clear, no turbidity, no odour, no sheen.	5.08	19.9	157.9	5.09	115.0	320.8
SW001	Secondary Management Zone	7/10/2025	Creek. 8m wide, 1.5m deep, flow observed.	0.65	0.75	Clear colour, no turbidity, no odour, no sheen.	-	17.5	150.4	5.71	107.7	313.5
SW006	Secondary Management Zone	2/04/2025	Creek/drain. 3m wide, 0.3m deep. No flow observed. Biosheen on water surface.	0.05	0.15	Brown, no turbidity, no odour, no sheen.	2.79	17.9	186.8	6.96	103.2	309.0
SW006	Secondary Management Zone	7/10/2025	Creek. 3m wide, 10cm deep, no flow.	0.10	0.05	Light brown, no turbidity, no odour, no sheen.	5.90	16.5	263.5	7.46	81.8	287.6
SW007	Secondary Management Zone	2/04/2025	Creek/drain. 1m wide, 0.5 deep. Flow observed.	0.15	0.25	Clear, no turbidity, no odour, no sheen.	5.62	19.8	140.0	6.69	108.8	314.6
SW007	Secondary Management Zone	7/10/2025	Creek. 3m wide, 0.5m deep. Flow observed	0.15	0.25	Clear, no turbidity, no odour, no sheen	8.61	19.3	166.1	7.26	79.0	284.8
SW009	Secondary Management Zone	2/04/2025	Creek. 5m wide, 0.5m deep. No flow observed.	0.15	0.25	Light brown, no turbidity, no odour, no sheen.	3.38	19.1	126.4	6.15	105.5	311.3
SW009	Secondary Management Zone	7/10/2025	Creek. 5m wide, 0.3m deep, flow observed.	0.05	0.15	Clear colour, no turbidity, no odour, no sheen.	5.96	17.3	166.3	6.07	100.8	306.6
SW011	Secondary Management Zone	7/04/2025	Creek. 5m wide, 0.5m deep. Flow observed. Biosheen on water surface.	0.20	0.30	Light yellow, no turbidity, no odour, no sheen	4.37	25.2	183.0	5.66	162.3	368.1
SW011	Secondary Management Zone	7/10/2025	Unable to access due to floodwaters	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SW019	Secondary Management Zone	14/04/2025	Creek. 10m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen	9.53	23.5	950.0	7.21	-17.8	188.0
SW019	Secondary Management Zone	14/10/2025	Creek. 5m wide, 1m deep. No flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen	5.52	17.5	121.0	7.37	135.5	341.3
SW023	Secondary Management Zone	2/04/2025	Creek. 5m wide, 2m deep. Flow observed.	0.90	1.00	Light yellow, no turbidity, no odour, no sheen.	2.61	20.5	822.0	6.87	133.9	339.7
SW023	Secondary Management Zone	7/10/2025	Creek. 6m wide, 2m deep, no flow.	0.90	1.00	Yellow, no turbidity, no odour, no sheen.	4.60	18.3	1,163.0	7.05	86.6	292.4
SW059	Secondary Management Zone	2/04/2025	Creek. 5m wide, 2m deep. No flow observed.	0.90	1.00	Brown, no turbidity, no odour, no sheen.	2.15	18.8	168.4	5.09	185.1	390.9
SW059	Secondary Management Zone	7/10/2025	Creek. 4m wide, 1m deep, flow observed.	0.40	0.50	Brown, low turbidity, no odour, no sheen.	1.29	15.2	193.9	6.03	31.2	237.0
SW600	Secondary Management Zone	10/04/2025	Creek. 5m wide, 1m deep. No flow observed.	0.40	0.50	Yellow, no turbidity, organic odour, no sheen.	9.72	26.3	1,338.0	7.15	36.1	241.9
SW600	Secondary Management Zone	13/10/2025	Creek. 5m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, organic odour, no sheen	4.62	18.3	894.0	7.09	-74.2	131.6
SW005	Broader Management Zone	2/04/2025	Creek. 4m wide, 1m deep. No flow observed. Biosheen on water surface.	0.15	0.25	Light yellow, no turbidity, no odour, no sheen.	4.35	19.3	413.2	5.97	120.3	326.1
SW005	Broader Management Zone	7/10/2025	Creek. 5m wide, 0.5m deep, flow observed.	0.15	0.25	Clear colour, no turbidity, no odour, no sheen.	6.40	17.3	587.0	6.23	108.9	314.7
SW014	Broader Management Zone	2/04/2025	Creek. 6m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	4.30	19.3	157.8	5.70	124.9	330.7
SW014	Broader Management Zone	7/10/2025	Creek. 5m wide, 1m deep, flow observed.	0.40	0.50	Clear colour, no turbidity, no odour, no sheen.	5.74	17.8	191.3	6.22	97.3	303.1
SW024	Broader Management Zone	2/04/2025	Creek. 10m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	3.12	20.0	4,317.0	6.97	109.8	315.6
SW024	Broader Management Zone	7/10/2025	Creek. 10m wide, 2m deep. No flow.	0.90	1.00	Light yellow, no turbidity, no odour, nosheen	4.17	17.0	9,555.0	6.92	115.6	321.4
SW062	Broader Management Zone	2/04/2025	Creek. 5m wide, 1m deep. Flow observed.	0.30	0.40	Yellow, no turbidity, no odour, no sheen.	1.66	18.7	1,125.0	6.77	93.8	299.6
SW062	Broader Management Zone	7/10/2025	Drain. 6m wide, 1m deep, flow observed.	0.40	0.50	Yellow, low turbidity, no odour, no sheen.	5.40	17.2	1,011.0	7.05	58.8	264.6
SW079	Broader Management Zone	2/04/2025	Creek. 3m wide, 1m deep. No flow observed. Biosheen on water surface.	0.40	0.50	Yellow, no turbidity, no odour, no sheen.	2.41	20.0	961.0	6.56	28.0	233.8
SW079	Broader Management Zone	8/10/2025	Creek. 3m wide, 0.5m deep, no flow.	0.15	0.25	Light yellow, no turbidity, no odour, no sheen.	2.60	18.3	2,396.0	6.55	-30.5	175.3
SW081	Broader Management Zone	2/04/2025	Creek. 5m wide, 1m deep. Flow observed.	0.30	0.40	Brown, no turbidity, no odour, no sheen.	2.25	18.7	598.0	5.47	121.6	327.4
SW081	Broader Management Zone	7/10/2025	Creek. 3m wide, 1m deep, flow observed.	0.40	0.50	Brown, low turbidity, no odour, no sheen.	2.10	15.8	356.9	6.37	61.4	267.2
SW259	Broader Management Zone	17/04/2025	Creek. 10m wide. 1.5m deep. Flow observed.	0.40	0.50	Yellow, no turbidity, no odour, no sheen.	6.81	22.7	9,934.0	6.88	20.0	225.8
SW259	Broader Management Zone	13/10/2025	Creek. 10m wide, 1m deep. Flow observed	0.40	0.50	Clear, no turbidity, no odour, no sheen	4.10	19.2	5,117.0	6.76	63.7	269.5

Notes
Corrected field Oxidation-Reduction Potential measurement Eh = Er + 205.8
mg/L milligrams per Litre
°C degrees Celsius
µS/cm microSiemens per centimetre
mV milliVolts
n/a not applicable

Table T4 - Sediment Observations

Location Code	On-base/ Management Zone	Sampled/Visit Date	Sample Depth From (m)	Sample Depth To (m)	Sample Comment
SD047	On-base	2/04/2025	0.10	0.20	SAND: yellow to grey, medium to coarse grain sands, low plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD047	On-base	9/10/2025	0.10	0.20	SAND; light grey to brown, medium grain sands, low plasticity, damp, with organic inclusions (rootlets). No odour, no staining
SD048	On-base	2/04/2025	0.10	0.20	Silty SAND: grey, fine to medium grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD048	On-base	9/10/2025	0.10	0.20	SAND: brown, fine to medium grain sands, low plasticity, damp, with organic inclusions (rootlets). No odour, no staining
SD055	On-base	2/04/2025	0.10	0.20	Sandy SILT: brown, medium to coarse grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD055	On-base	9/10/2025	0.10	0.20	sandy SILT: brown, fine to medium grain sands, low plasticity, wet, organic inclusions (rootlets). No odour, no staining
SD108	On-base	2/04/2025	0.10	0.20	Sandy SILT: brown, medium to coarse grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD108	On-base	9/10/2025	0.10	0.20	Silty SAND: grey to brown, fine to medium grain sands, no plasticity, saturated, with organic inclusions (rootlets and leaf litter). No odour, no staining
SD110	On-base	2/04/2025	0.10	0.20	Silty SAND: grey to black, medium to coarse grain sands, no plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD110	On-base	9/10/2025	0.10	0.20	Sandy SILT: brown, fine to medium grain sands, low plasticity, saturated, organic inclusions (rootlets). No odour, no staining.
SD060	Primary Management Zone	2/04/2025	0.10	0.20	Silty SAND: grey, medium to coarse grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD060	Primary Management Zone	7/10/2025	0.10	0.20	Silty SAND: grey, medium grain sands, low plasticity, damp, organic inclusions (rootlets). No odour, no staining.
SD333	Primary Management Zone	16/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, high plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD333	Primary Management Zone	13/10/2025	0.10	0.20	Sandy CLAY: brown, fine grain sands, medium plasticity, damp, with inclusions (rootlets). No odour, no staining
SD001	Secondary Management Zone	2/04/2025	0.10	0.20	Sandy SILT: brown, fine to medium grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD001	Secondary Management Zone	7/10/2025	0.10	0.20	SAND: Brown, medium grain sands, low plasticity, saturated, organic inclusions (rootlets and leaf litter). Sulphurous odour, no staining.
SD006	Secondary Management Zone	2/04/2025	0.10	0.20	Sandy SILT: brown, fine grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD006	Secondary Management Zone	7/10/2025	0.10	0.20	SAND: Grey, fine to medium grain, small angular gravels, no plasticity, saturated. No odour, no staining.
SD007	Secondary Management Zone	2/04/2025	0.10	0.20	SAND: grey to brown, fine to medium grain sands, no plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD007	Secondary Management Zone	7/10/2025	0.10	0.20	Silty SAND: brown, fine to medium grain sands, low plasticity, saturated, organic inclusions (rootlets). No odour, no staining.
SD009	Secondary Management Zone	2/04/2025	0.10	0.20	Sandy SILT: brown, fine grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD009	Secondary Management Zone	7/10/2025	0.10	0.20	SAND: grey, fine grain sands, no plasticity, damp. No odour, no staining.
SD011	Secondary Management Zone	7/04/2025	0.10	0.20	Silty SAND: dark brown, medium to coarse grain sands, no plasticity, saturated, no inclusions. No odour, no staining.
SD011	Secondary Management Zone	7/10/2025	n/a	n/a	n/a
SD019	Secondary Management Zone	14/04/2025	0.10	0.20	SILT: brown, fine grain, medium plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD019	Secondary Management Zone	14/10/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, damp, with inclusions (rootlets). No odour, no staining.
SD023	Secondary Management Zone	2/04/2025	0.10	0.20	Sandy SILT: brown, fine grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD023	Secondary Management Zone	7/10/2025	0.10	0.20	Sandy SILT: orange-brown, medium grain sands, small sub-angular gravels, medium plasticity, damp. No odour, no staining
SD059	Secondary Management Zone	2/04/2025	0.10	0.20	Silty SAND: brown, medium to coarse grain sands, low plasticity, saturated, with inclusions (gravels and rootlets). No odour, no staining.
SD059	Secondary Management Zone	7/10/2025	0.10	0.20	SAND: grey, fine to medium grain sands, medium angular gravels, no plasticity, saturated, organic inclusions (rootlets). No odour, no staining
SD600	Secondary Management Zone	10/04/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, wet, with organic inclusions (rootlets). Organic odour, no staining.
SD600	Secondary Management Zone	13/10/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, saturated, with organic inclusions (rootlets). Organic odour, no staining.
SD005	Broader Management Zone	2/04/2025	0.10	0.20	Sandy CLAY: brown, fine grain sands, high plasticity, damp, with organic inclusions (rootlets). Organic odour, no staining.
SD005	Broader Management Zone	7/10/2025	0.10	0.20	SILT: brown to black, medium grain sands, small to medium angular gravels, low plasticity, saturated. No odour, no staining
SD014	Broader Management Zone	2/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, medium plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD014	Broader Management Zone	7/10/2025	0.10	0.20	SILT: brown, fine grain sands, medium plasticity, damp, organic inclusions (rootlets). No odour, no staining.
SD024	Broader Management Zone	2/04/2025	0.10	0.20	Sandy CLAY: brown, fine to medium grain sands, medium plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD024	Broader Management Zone	7/10/2025	0.10	0.20	SILT: dark brown, fine grain sands, medium plasticity, damp, organic inclusions (rootlets). No odour, no staining
SD062	Broader Management Zone	2/04/2025	0.10	0.20	Sandy CLAY: brown, medium to coarse grain sands, low plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD062	Broader Management Zone	7/10/2025	0.10	0.20	SAND: brown, fine to medium grain sands, low plasticity, damp no odour, no sheen
SD079	Broader Management Zone	2/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, low plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD079	Broader Management Zone	8/10/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, damp, organic inclusions (rootlets). No odour, no staining
SD081	Broader Management Zone	2/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, medium plasticity, saturated, with organic inclusions (rootlets). Organic odour, no staining.
SD081	Broader Management Zone	7/10/2025	0.10	0.20	SILT: brown to black, fine grain sands, low plasticity, damp, organic inclusions (rootlets). No odour, no staining
SD259	Broader Management Zone	17/04/2025	0.10	0.20	Silty SAND: brown, fine grain, low plasticity, saturated, no inclusions. No odour, no staining.
SD259	Broader Management Zone	13/10/2025	0.10	0.20	SAND: brown to grey, medium grain, no plasticity, saturated. No odour, no staining
SD254	Outside Broader Management Zone	17/04/2025	0.10	0.20	Silty SAND: Brown, fine to medium grain, low plasticity, saturated, with inclusions (shells and rootlets). No odour, no staining.
SD254	Outside Broader Management Zone	13/10/2025	0.10	0.20	Silty SAND: black, medium to coarse grain, no plasticity, saturated, with inclusions (shell fragments and rootlets). No odour, no staining
SD255	Outside Broader Management Zone	17/04/2025	0.10	0.20	SILT: brown, fine grain, high plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD255	Outside Broader Management Zone	13/10/2025	0.10	0.20	SAND: grey, medium to coarse grain, no plasticity, saturated, with inclusions (shell fragments). No odour, no staining
SD326	Outside Broader Management Zone	17/04/2025	0.10	0.20	SILT: black, fine grain, high plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD326	Outside Broader Management Zone	13/10/2025	0.10	0.20	SAND: grey, medium to coarse grain, no plasticity, saturated, with inclusions (shell fragments). No odour, no staining.

Notes
n/a not applicable

[illegible]

[illegible]

[illegible]

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational water quality guideline	10	0.008	0.03	2			1																										
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)	0.02																																
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	0.11	12.1	2.26	14.4	14.9	-	0.04	0.06	0.08	-	<0.02	-	<0.1	0.03	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	18 May 2021	0908 MW166 210518	Normal	NSW 0908 PFASOMP	On-base	-	0.11	12.1	2.26	14.4	14.9	-	0.04	0.06	0.08	-	<0.02	-	<0.1	0.03	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	18 Nov 2021	0908 MW166 211118	Normal	NSW 0908 PFASMGMT	On-base	-	0.05	13.7	0.82	14.5	14.8	-	0.02	0.03	0.05	-	<0.02	-	<0.1	<0.02	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	18 Nov 2021	0908 MW166 211118	Normal	NSW 0908 PFASOMP	On-base	-	0.05	14	0.89	14.9	15.2	-	0.02	0.04	0.06	-	<0.02	-	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	25 May 2022	0908 MW166 220525	Normal	NSW 0908 PFASMGMT	On-base	-	0.11	14.5	1.33	15.8	16.6	-	0.03	0.04	0.07	-	<0.02	-	<0.1	0.07	0.39	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	25 May 2022	0908 MW166 220525	Normal	NSW 0908 PFASOMP	On-base	-	0.09	12.6	1.02	13.6	14	-	0.02	0.04	0.07	-	<0.02	-	<0.1	0.03	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	09 Nov 2022	0908 MW166 221109	Normal	NSW 0908 PFASOMP	On-base	-	0.08	6.74	0.84	7.58	7.95	-	<0.02	0.02	0.08	-	<0.02	-	<0.1	0.03	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	10 May 2023	0908 MW166 230510	Normal	NSW 0908 PFASOMP 23	On-base	-	0.05	18.6	0.27	18.9	19	-	<0.02	<0.02	0.04	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	22 Nov 2023	0908 MW166 231122	Normal	NSW 0908 PFASOMP 23	On-base	-	0.02	8.45	0.11	8.56	8.65	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	17 Apr 2024	0908 MW166 240417	Normal	NSW 0908 PFASOMP 24	On-base	-	0.02	12	0.21	12.2	12.3	-	<0.02	<0.02	0.03	-	0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	24 Sep 2024	0908 MW166 240924	Normal	NSW 0908 PFASOMP 24	On-base	-	0.02	12.2	0.21	12.4	12.5	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	04 Apr 2025	0908 MW166 250404	Normal	NSW 0908 PFASOMP 25	On-base	-	0.03	11.4	0.35	11.8	11.9	<0.02	<0.02	<0.02	0.03	0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	10 Oct 2025	0908 MW166 251010	Normal	NSW 0908 PFASOMP 25	On-base	-	0.03	11.8	0.51	12.3	12.5	<0.02	<0.02	0.02	0.02	0.03	<0.02	<0.05	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	06 Nov 2025	0908 MW166 251106	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	11.5	0.43	11.9	12.1	<0.02	<0.02	<0.02	0.04	0.04	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	15 Nov 2025	0908 MW166 251115	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	12.2	0.38	12.6	12.7	<0.02	<0.02	0.02	0.03	0.04	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	17 Nov 2025	0908 MW166 251117	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	10.1	0.38	10.5	10.6	<0.02	<0.02	<0.02	0.03	0.03	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	18 Nov 2025	0908 MW166 251118	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	11.4	0.4	11.8	11.9	<0.02	<0.02	<0.02	0.04	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	19 Nov 2025	0908 MW166 251119	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	11	0.35	11.4	11.5	<0.02	<0.02	<0.02	0.03	0.03	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	25 Nov 2025	0908 MW166 251125	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	10.1	0.36	10.5	10.6	<0.02	<0.02	0.02	0.03	0.03	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	02 Dec 2025	0908 MW166 251202	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	9	0.38	9.38	9.54	<0.02	<0.02	0.02	0.03	0.03	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	10 Dec 2025	0908 MW166 251210	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	10.2	0.35	10.6	10.7	<0.02	<0.02	0.02	0.03	0.03	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	16 Dec 2025	0908 MW166 251216	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	10.1	0.39	10.5	10.6	<0.02	<0.02	0.02	0.03	0.03	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	23 Dec 2025	0908 MW166 251223	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.03	11.7	0.33	12	12.2	<0.02	<0.02	0.03	0.03	0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW166	30 Dec 2025	0908 MW166 251230	Normal	NSW 0908 PFASMGMT 25	On-base	-	0.02	9.15	0.38	9.53	9.68	<0.02	<0.02	0.03	0.03	0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW167	13 Jan 2016	MW167 13012016	Normal	NSW 0908 PFAS	On-base	-	0.61	164	10.3	174.3	-	-	0.77	-	-	-	<0.02	-	-	-	3.05	0.17	0.02	<0.02	<0.05	<0.05	<0.05	<0.5	-	<0.1	<0.1	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5	
MW167	01 Sep 2016	MW167 010916	Normal	NSW 0908 PFAS	On-base	-	1.6	120	24	144	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.1	5.5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	-	<0.05
MW167	01 Sep 2016	QC108 010916	Field D	NSW 0908 PFAS	On-base	-	1.9	150	27	177	-	-	1.2	-	-	-	<0.01	-	<0.05	<0.01	6.2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	<0.05
MW167	12 Oct 2016	MW167 121016	Normal	NSW 0908 PFAS	On-base	-	<0.01	110	19	129	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	3.3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	-	<0.05
MW167	17 Jan 2017	MW167 170117	Normal	ACTNSW Hist 202012-3	On-base	-	3.4	240	32	272	-	-	<3	-	-	-	<3	-	<15	<3	4.7	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<15	6.1	-	<15	-	<15	-	
MW167	17 Jan 2017	MW167 170117	Normal	NSW 0908 PFAS	On-base	-	3.4	240	32	272	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	4.7	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	-	<0.05
MW167	17 Jan 2017	MW167 GW 17012017	Normal	NSW 0908 PFAS	On-base	-	4.31	276	26.5	302	322	-	1.26	2.39	2.26	-</																								

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											</
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Table T5 - Historical Groundwater Analytical Results

								PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides										
								Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSSE)		
								µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR								0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations								10	0.008	0.03	2																															
PFAS NEMP 2025 Recreational water quality guideline								19	(*)																																	
PFAS NEMP 2025 Freshwater 99%									0.02																																	
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)																																										
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A											190.3																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B											5.67																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D											0.05																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	<0.01	0.11	0.15	0.26	0.37	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
MW169D	30 May 2019	0908 MW169D 190530	Normal	NSW 0908 PFAS	On-base	-		0.09	0.71	5.54	6.25	12.4	-	1.46	1.34	0.1	-	<0.02	-	0.2	0.58	2.22	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	07 Nov 2019	0908 MW169D 191107	Normal	NSW 0908 PFASOMP	On-base	-		0.09	0.67	5.44	6.11	12.2	-	1.37	1.2	0.09	-	<0.02	-	0.2	0.49	2.48	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	07 Nov 2019	0908 QC103 191107	Field D	NSW 0908 PFASOMP	On-base	-		0.062	0.52	5.2	5.72	-	-	1.2	0.95	0.049	<0.01	<0.01	<0.02	0.23	0.43	1.9	0.12	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.074	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.01	<0.05	<0.05	<0.01	<0.05	<0.02	<0.05
MW169D	07 Nov 2019	0908 QC203 191107	Interlab D	NSW 0908 PFASOMP	On-base	-		0.03	0.28	2.18	2.46	4.8	-	0.47	0.56	0.03	-	<0.02	-	<0.1	0.18	1.01	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	13 May 2020	0908 MW169D 200513	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.06	0.33	0.39	0.79	-	0.08	0.06	<0.02	-	<0.02	-	<0.1	0.03	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	16 Nov 2020	0908 MW169 D 201116	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.09	0.43	0.52	1.08	-	0.12	0.09	<0.02	-	0.04	-	<0.1	0.03	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.1	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	18 May 2021	0908 MW169D 210518	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.08	0.21	0.29	0.58	-	0.08	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	16 Nov 2021	0908 MW169D 211116	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.08	0.1	0.18	0.24	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	19 May 2022	0908 MW169D 220519	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.06	0.12	0.18	0.21	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	09 Nov 2022	0908 MW169D 221109	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.08	0.19	0.27	0.37	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	09 Nov 2022	0908 QC113 221109	Field D	NSW 0908 PFASOMP	On-base	-		<0.01	0.08	0.19	0.27	0.37	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW169D	09 Nov 2022	0908 QC213 221109	Interlab D	NSW 0908 PFASOMP	On-base	-		<0.01	0.06	0.16	0.22	0.32	-	0.02	0.03	<0.01	-	<0.02	-	<0.02	<0.02	0.05	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.05	<0.01	<0.01	<0.02	<0.02	<0.										

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								PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides										
								Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSSE)		
LOR								0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.001			
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations								0.2	0.008	0.03				1																												
PFAS NEMP 2025 Recreational water quality guideline								10			2																															
PFAS NEMP 2025 Freshwater 99%								19	(*)																																	
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)									0.02																																	
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A											190.3																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B											5.67																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D											0.05																															
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	0.06	1.83	0.74	2.57	2.84	-	<0.02	0.02	0.14	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	20 Jun 2019	0908 MW171S 190620	Normal	NSW 0908 PFAS	On-base	-		0.06	1.83	0.74	2.57	2.84	-	<0.02	0.02	0.14	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05 <td><0.05</td> <td><0.05</td> <td><0.05</td> <td><0.02</td> <td><0.05</td> <td><0.02</td> <td><0.05</td> <td><0.05</td> <td><0.02</td> <td><0.05</td>	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	20 Jun 2019	0908 MW171S 190620	Normal	NSW 0908 PFASMGMT	On-base	-		0.06	1.83	0.74	2.57	2.84	-	<0.02	0.02	0.14	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	24 Sep 2019	0908 MW171S 190924	Normal	NSW 0908 PFASMGMT	On-base	-		0.07	1.03	0.96	1.99	2.34	-	0.03	0.06	0.12	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	25 Oct 2019	0908 MW171S 191025	Normal	NSW 0908 PFASMGMT	On-base	-		0.02	1.02	0.31	1.33	1.43	-	<0.02	<0.02	0.06	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	29 Nov 2019	0908 MW171S 191129	Normal	NSW 0908 PFASMGMT	On-base	-		0.03	0.65	0.21	0.86	0.96	-	<0.02	<0.02	0.07	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW171S	29 Nov 2019	0908 QC100 191129	Field D	NSW 0908 PFASMGMT	On-base	-		0.03	0.69	0.21	0.9	1	-	<0.02	<0.02	0.07	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW171S	29 Nov 2019	0908 QC200 191129	Interlab D	NSW 0908 PFASMGMT	On-base	-		0.02	<0.02	0.19	0.19	-	-	<0.01	<0.01	0.047	<0.01	<0.01	<0.02	<0.05	<0.02	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
MW171S	13 Mar 2020	0908 MW171S 200316	Normal	NSW 0908 PFASMGMT	On-base	-		0.04	0.56	0.62	1.18	1.43	-	<0.02	0.03	0.12	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	15 May 2020	0908 MW171S 200515	Normal	NSW 0908 PFASOMP	On-base	-		0.06	1.74	0.72	2.46	2.72	-	0.04	0.03	0.07	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	23 Jun 2020	0908 MW171S 200623	Normal	NSW 0908 PFASMGMT	On-base	-		0.06	0.32	0.43	0.75	1.06	-	0.02	0.02	0.11	-	<0.02	-	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	23 Jun 2020	0908 QC101 200623	Field D	NSW 0908 PFASMGMT	On-base	-		0.06	0.32	0.4	0.72	1	-	<0.02	0.02	0.1	-	<0.02	-	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW171S	23 Jun 2020	0908 QC201 200623	Interlab D	NSW 0908 PFASMGMT	On-base	-		0.043	0.16	0.36	0.52	-	-	0.014	0.016	0.064	<0.01	<0.01	<0.02	<0.05	<0.02	0.066	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
MW171S	30 Sep 2020	0908 MW171S 200930	Normal	NSW 0908 PFASMGMT	On-base	-		0.03	0.31	0.46	0.77	1	-	0.03	0.05	0.07	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	30 Sep 2020	0908 QC100 200930	Field D	NSW 0908 PFASMGMT	On-base	-		0.04	0.46	0.66	1.12	1.44	-	0.05	0.07	0.																										

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational water quality guideline	10	0.008	0.03	2			1																										
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	0.03	0.07	0.92	0.99	1.92	-	0.05	0.08	<0.02	-	<0.02	-	0.2	0.44	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	10 May 2023	0908 MW172 230510	Normal	NSW 0908 PFASOMP 23	On-base	-		0.03	0.07	0.92	0.99	1.92	-	0.05	0.08	<0.02	-	<0.02	-	0.2	0.44	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	22 Nov 2023	0908 MW172 231122	Normal	NSW 0908 PFASOMP 23	On-base	-		0.03	0.04	0.45	0.49	0.94	-	0.11	0.15	<0.02	-	<0.02	-	<0.1	<0.02	0.12	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	17 Apr 2024	0908 MW172 240417	Normal	NSW 0908 PFASOMP 24	On-base	-		0.02	0.03	0.69	0.72	1.23	-	0.14	0.2	<0.02	-	<0.02	-	<0.1	<0.02	0.09	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	24 Sep 2024	0908 MW172 240924	Normal	NSW 0908 PFASOMP 24	On-base	-		0.08	0.03	4.28	4.31	5.27	-	0.25	0.45	<0.02	-	<0.02	-	<0.1	0.02	0.08	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	01 Apr 2025	0908 MW172 250401	Normal	NSW 0908 PFASOMP 25	On-base	-		0.03	0.03	2.87	2.9	3.58	0.03	0.18	0.32	<0.02	<0.02	<0.02	<0.05	<0.1	0.02	0.08	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	09 Oct 2025	0908 MW172 251009	Normal	NSW 0908 PFASOMP 25	On-base	-		0.04	0.08	1.2	1.28	1.62	<0.02	0.08	0.1	<0.02	<0.02	<0.02	<0.05	<0.1	0.03	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	15 Jan 2016	MW175D 15012016	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.04	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	<0.05	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
MW175D	29 Aug 2016	MW175D 290816	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.33	0.09	0.42	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-	
MW175D	19 Oct 2016	MW175D 191016	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.67	0.09	0.76	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW175D	19 Dec 2016	MW175D GW 19122016	Normal	NSW 0908 PFAS	On-base	-		0.02	3.01	0.19	3.2	3.29	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	20 Dec 2016	MW175D GW 20122016	Normal	NSW 0908 PFAS	On-base	-		0.02	3.01	0.19	3.2	3.29	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	12 Jan 2017	MW175D 120117	Normal	ACTNSW Hist 202012-3	On-base	-		0.02	2.6	0.21	2.81	-	-	0.02	-	-	-	<0.01	-	<0.05	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW175D	24 Jan 2017	MW175D GW 24012017	Normal	NSW 0908 PFAS	On-base	-		0.09	3.49	0.76	4.25	4.81	-	0.06	0.08	0.09	-	<0.02	-	<0.1	0.04	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	24 Jan 2017	QC717 24012017	Field D	NSW 0908 PFAS	On-base	-		0.08	3.8	0.71	4.51	5.05	-	0.06	0.08	0.08	-	<0.02	-	<0.1	0.04	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	02 May 2017	MW175D 020517	Normal	ACTNSW Hist 202012-3	On-base	-		0.03	1.4	0.33	1.73	-	-	0.02	0.03	0.04	-	<0.01	-	<0.05	0.01	0.08	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.01	<0.05	
MW175D	20 Apr 2018	MW175D GW 20042018	Normal	NSW 0908 PFAS	On-base	-		0.05	2.5	0.43	2.93	3.23	-	0.03	0.04	0.05	-	<0.02	-	<0.1	<0.02	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	14 Sep 2018	0908 MW175D 180914	Normal	NSW 0908 PFASMGMT	On-base	-		0.2	8.67	1.77	10.4	12	-	0.13	0.16	0.22	-	<0.02	-	<0.1	0.09	0.67	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	29 Nov 2018	0908 MW175D 181129	Normal	NSW 0908 PFAS	On-base	-		0.08	4.43	0.77	5.2	5.75	-	0.06	0.07	0.06	-	<0.02	-	<0.1	0.04	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	31 May 2019	0908 MW175D 190531	Normal	NSW 0908 PFAS	On-base	-		0.08	8.3	0.6	8.9	9.43	-	0.05	0.06	0.08	-	<0.02	-	<0.1	0.04	0.19	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	08 Nov 2019	0908 MW175D 191108	Normal	NSW 0908 PFASOMP	On-base	-		0.06	2	0.65	2.65	3.25	-	0.08	0.09	0.05	-	<0.02	-	<0.1	0.05	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	11 May 2020	0908 MW175D 200511	Normal	NSW 0908 PFASOMP	On-base	-		0.1	4.07	0.83	4.9	5.74	-	0.06	0.1	0.09	-	<0.02	-	<0.1	0.06	0.3	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.1	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW175D	17 Nov 2020	0908 MW175 D 201117	Normal	NSW 0908 PFASOMP	On-base	-		0.06	3.99	0.64	4.63	5.16	-	0.05	0.06	0.06	-	<0.02	-	<0.1	0.05	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	17 May 2021	0908 MW175D 210517	Normal	NSW 0908 PFASOMP	On-base	-		0.04	1.24	0.46	1.7	2.11	-	0.05	0.07	0.03	-	<0.02	-	<0.1	0.02	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	16 Nov 2021	0908 MW175D 211116	Normal	NSW 0908 PFASOMP	On-base	-		0.03	2.1	0.4	2.5	2.89	-	0.05	0.05	0.03	-	<0.02	-	<0.1	0.03	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	16 Nov 2021	0908 QC108 211116	Field D	NSW 0908 PFASOMP	On-base	-		0.04	2.4	0.44	2.84	3.27	-	0.05	0.05	0.03	-	<0.02	-	<0.1	0.04	0.2	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	19 May 2022	0908 MW175D 220519	Normal	NSW 0908 PFASOMP	On-base	-		0.05	3.45	0.76	4.21	4.81	-	0.06	0.08	0.04	-	<0.02	-	<0.1	0.08	0.26	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	10 Nov 2022	0908 MW175D 221110	Normal	NSW 0908 PFASOMP	On-base	-		0.07	4.43	1.13	5.56	6.31	-	0.07	0.13	0.07	-	<0.02	-	<0.1	0.08	0.29	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	10 May 2023	0908 MW175D 230510	Normal	NSW 0908 PFASOMP 23	On-base	-		0.07	4.61	1.05	5.66	6.32	-	0.07	0.1	0.04	-	<0.02	-	<0.1																					

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Table T5 - Historical Groundwater Analytical Results

								PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
								Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSSE)	
								µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L			
LOR								0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.001	0.0005	0.001	
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations								10	0.008	0.03	2																														
PFAS NEMP 2025 Recreational water quality guideline								19	(*)																																
PFAS NEMP 2025 Freshwater 99%								0.02																																	
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)																																									
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A											190.3																														
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B											5.67																														
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D											0.05																														
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	0.23	13	2.8	15.8	-	-	0.16	-	-	-	<0.01	-	0.1	0.22	2.2	0.34	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-
MW208	26 Aug 2016	MW208 260816	Normal	NSW 0908 PFAS	On-base	-		0.2	12	11	23	-	-	0.1	-	-	-	<0.01	-	0.06	0.12	0.97	0.62	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-		
MW208	18 Oct 2016	MW208 181016	Normal	NSW 0908 PFAS	On-base	-		0.17	10	9.4	19.4	-	-	0.1	-	-	-	<0.01	-	<0.05	0.11	0.79	0.48	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-		
MW208	18 Oct 2016	QC103 181016	Field D	NSW 0908 PFAS	On-base	-		0.35	13	4.1	17.1	-	-	0.05	-	-	-	<0.01	-	0.07	0.06	0.44	0.08	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW208	17 Jan 2017	MW208 170117	Normal	ACTNSW Hist 202012-3	On-base	-		0.35	13	4.1	17.1	-	-	0.05	-	-	-	<0.01	-	0.07	0.06	0.44	0.08	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW208	17 Jan 2017	MW208 170117	Normal	NSW 0908 PFAS	On-base	-		0.35	13	4.1	17.1	-	-	0.05	-	-	-	<0.01	-	0.07	0.06	0.44	0.08	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW208	19 Jan 2017	MW208 GW 170119	Normal	NSW 0908 PFAS	On-base	-		0.32	8.8	7.72	16.5	18.1	-	0.13	0.16	0.28	-	<0.02	-	<0.1	0.1	0.53	0.09	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW208	19 Jan 2017	MW208 GW 170119	Normal	NSW 0908 PFAS	On-base	-		-	-	-	16.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
MW208	09 May 2017	MW208 090517	Normal	ACTNSW Hist 202012-3	On-base	-		0.92	17	5.7	22.7	-	-	0.11	0.18	0.34	-	<0.01	-	0.22	0.3	0.84	0.34	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.05	<0.2	<0.05	<0.05	<0.2	<0.05	<0.05	
MW208	28 May 2019	0908 MW208 190528	Normal	NSW 0908 PFAS	On-base	-		0.12	8.37	1.94	10.3	11	-	0.02	0.04	0.21	-	<0.02	-	<0.1	0.05	0.19	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	
MW208	28 May 2019	0908 MW208 190528	Normal	NSW 0908 PFAS	On-base	-		-	-	-	10.31	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
MW208	17 Oct 2019	0908 MW208 191017	Normal	NSW 0908 PFASMGMT	On-base	-		0.1	6.98	1.13	8.11	8.72	-	0.04	0.07	0.13	-	<0.02	-	<0.1	0.07	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW208	06 Nov 2019	0908 MW208 191106	Normal	NSW 0908 PFASOMP	On-base	-		0.09	6.86	1.3	8.16	8.85	-	0.04	0.05	0.12	-	<0.02	-	<0.1	0.09	0.25	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW208	12 May 2020	0908 MW208 200512	Normal	NSW 0908 PFASOMP	On-base	-		0.1	7.06	1.17	8.23	8.75	-	0.03	0.04	0.21	-	<0.02	-	<0.1	0.04	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW208	17 Nov 2020	0908 MW208 201117	Normal	NSW 0908 PFASOMP	On-base	-		0.54	21.7	5.67	27.4	31.2	-	0.14	0.42	1.16	-	<0.02	-	0.1	0.26	1	0.18	<0.02	<0.02	<0.02	<0.02	<0.05.													

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides						
	Perfluorooctanoic acid (PFCA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	perfluoropropanesulfonic acid (PFPrS)	perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
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Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
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[illegible]

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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MW126D	23 Nov 2023	0908 MW126D 231123	Normal	NSW 0908 PFASOMP	23	Primary Management Zone	Risk Zone A	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<-0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	&
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[illegible]

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Table T5 - Historical Groundwater Analytical Results

								PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides																																																																																																																																																																																																																																																																																																																																											
								Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSSE)																																																																																																																																																																																																																																																																																																																																			
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L																																																																																																																																																																																																																																																																																																																																								
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001																																																																																																																																																																																																																																																																																																																																						
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03		2																																																																																																																																																																																																																																																																																																																																																																						
PFAS NEMP 2025 Recreational water quality guideline	10																																																																																																																																																																																																																																																																																																																																																																										
PFAS NEMP 2025 Freshwater 99%	19	(*)																																																																																																																																																																																																																																																																																																																																																																									
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																																																																																																																																																																																																																																																																																																																																																																									
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A					190.3																																																																																																																																																																																																																																																																																																																																																																						
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B					5.67																																																																																																																																																																																																																																																																																																																																																																						
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D					0.05																																																																																																																																																																																																																																																																																																																																																																						
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<

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	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	perfluoropropanesulfonic acid (PFPrS)	perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
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Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Table T5 - Historical Groundwater Analytical Results

								PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
								Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSSE)	
LOR								0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001				
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations								0.2	0.008	0.03				1																											
PFAS NEMP 2025 Recreational water quality guideline								10			2																														
PFAS NEMP 2025 Freshwater 99%								19	(*)																																
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)									0.02																																
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A											190.3																														
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B											5.67																														
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D											0.05																														
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	0.08	2.85	1.03	3.88	4.55	-	0.09	0.1	0.1	-	<0.02	-	<0.1	0.05	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW161D	30 May 2019	0908 MW161D 190530	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B		0.06	2.22	1.01	3.23	3.85	-	0.1	0.09	0.06	-	<0.02	-	<0.1	0.06	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161D	21 May 2020	0908 MW161D 200521	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B		0.05	1.6	0.86	2.46	2.97	-	0.07	0.08	0.06	-	<0.02	-	<0.1	0.05	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161D	26 May 2021	0908 MW161D 210526	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B		0.06	1.94	0.85	2.79	3.3	-	0.06	0.09	0.08	-	<0.02	-	<0.1	0.04	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161D	01 Jun 2022	0908 MW161D 220601	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B		0.05	1.89	0.74	2.63	3.11	-	0.06	0.08	0.06	-	<0.02	-	<0.1	0.05	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161D	11 May 2023	0908 MW161D 230511	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW161D	22 Apr 2024	0908 MW161D 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B		0.01	0.67	0.21	0.88	0.93	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161D	10 Apr 2025	0908 QC115 250410	Field D	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B		0.01	0.46	0.18	0.64	0.68	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW161D	10 Apr 2025	0908 QC215 250410	Interlab D	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B		0.02	0.67	0.25	0.92	1	-	0.02	0.02	0.02	-	<0.02	-	<0.02	<0.02	0.04	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW161S	26 Feb 2016	MW161S 26022016	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B		0.04	2.26	1.32	3.58	-	-	0.13	-	-	-	-	<0.02	-	-	-	0.23	0.04	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW161S	26 Feb 2016	MW161S 26022016	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B		0.07	2.98	-	3.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW161S	08 Feb 2017	MW161S GW 08022017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B		0.08	2.66	1.4	4.06	4.75	-	0.09	0.11	0.06	-	<0.02	-	<0.1	0.06	0.19	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161S	30 May 2019	0908 MW161S 190530	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B		0.03	1.91	1.09	3	3.24	-	0.03	0.04	0.05	-	<0.02	-	<0.1	0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW161S	21 May 2020	0908 MW161S 200521	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B		0.06	2.39	1.22	3.61	4.28	-	0.12	0.1	0.07	-	<0.02	-	<0.1	0.06	0.23	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161S	26 May 2021	0908 MW161S 210526	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B		0.05	3.64	0.96	4.6	5.14	-	0.06	0.08	0.08	-	<0.02	-	<0.1	0.05	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.04	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW161S	01 Jun 2022	0908 MW161S 220601	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B		0.07	2.39	0.84	3.23	3.74	-	0.05	0.07	0.09	-	<0.02	-	<0.																					

Watt	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	0.004	<0.002	0.028	0.028	0.054	<0.01	0.005	0.008	<0.002	-	<0.002	<0.005	<0.01	<0.002	0.009	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.005	<0.002	<0.005
MW230S	15 Oct 2005	0908 MW230S 251015	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone C																																			
MW247D	01 Feb 2017	MW247D GW 01022017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	01 Feb 2017	QC722 GW 01022017	Field D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	28 Feb 2017	MW247D GW 280217	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	12 Apr 2018	MW247D GW 12042018	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	12 Apr 2018	QC103 GW 12042018	Field D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	12 Apr 2018	QC203 GW 1204218	Interlab D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	30 Nov 2018	0908 MW247D 181130	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	31 May 2019	0908 MW247D 190531	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247D	06 Nov 2019	0908 MW247D 191106	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247D	15 May 2020	0908 MW247D 200515	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247D	24 Nov 2020	0908 MW247 D 201124	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247D	18 May 2021	0908 MW247D 210518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247D	12 Nov 2021	0908 QC106 211112	Field D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247D	18 May 2022	0908 MW247D 220518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247D	08 Nov 2022	0908 MW247D 221108	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247D	08 May 2023	0908 MW247D 230508	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B																																			
MW247D	24 Nov 2023	0908 MW247D 231124	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B																																			
MW247D	22 Apr 2024	0908 MW247D 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B																																			
MW247D	23 Sep 2024	0908 MW247D 240923	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B																																			
MW247D	23 Sep 2024	0908 QC107 240923	Field D	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B																																			
MW247D	23 Sep 2024	0908 QC207 240923	Interlab D	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B																																			
MW247D	03 Apr 2025	0908 MW247D 250403	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B																																			
MW247D	08 Oct 2025	0908 MW247D 251008	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B																																			
MW247S	01 Feb 2017	MW247S GW 01022017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247S	01 Feb 2017	QC821 GW 01022017	Interlab D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247S	28 Feb 2017	MW247S GW 280217	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247S	12 Apr 2018	MW247S GW 12042018	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247S	30 Nov 2018	0908 MW247S 181130	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247S	31 May 2019	0908 MW247S 190531	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B																																			
MW247S	06 Nov 2019	0908 MW247S 191106	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247S	15 May 2020	0908 MW247S 200515	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247S	24 Nov 2020	0908 MW247 S 201124	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247S	18 May 2021	0908 MW247S 210518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247S	12 Nov 2021	0908 MW247S 211112	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247S	18 May 2022	0908 MW247S 220518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247S	08 Nov 2022	0908 MW247S 221108	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B																																			
MW247S	08 May 2023	0908 MW247S 230508	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B																																			
MW247S	24 Nov 2023	0908 MW247S 231124	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B																																			
MW247S	22 Apr 2024	0908 MW247S 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B																																			
MW247S	23 Sep 2024	0908 MW247S 240923	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B																																			
MW247S	03 Apr 2025	0908 MW247S 250403	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B																																			
MW247S	08 Oct 2025	0908 MW247S 251008	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B																																			
MW255D	01 Mar 2017	MW255D GW 010317	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D																																			
MW255D	29 Mar 2018	MW255D GW 29032018	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D																																			
MW255D	20 Nov 2018	0908 MW255D 181120	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D																																			
MW255D	23 May 2019	0908 MW255D 190523	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D																																			
MW255D	19 May 2020	0908 MW255D 200519	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone D																																			
MW255D	13 May 2021	0908 MW255D 210513	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone D																																			
MW255D	18 May 2022	0908 MW255D 220518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone D																																			
MW255D	18 May 2022	0908 QC106 220518	Field D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone D																																			
MW255D	09 May 2023	0908 MW255D 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone D																																			
MW255D	09 May 2023	0908 QC109 230509	Field D	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone D																																			
MW255D	09 May 2023	0908 QC209 230509	Interlab D	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone D																																			

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	perfluoropropanesulfonic acid (PFPrS)	perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	perfluoropropanesulfonic acid (PFPrS)	perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
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Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	perfluoropropanesulfonic acid (PFPrS)	perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270D	20 Sep 2024	0908 MW270D 240920	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	<0.002	<0.002	<0.002	0.003	0.003	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW270D	15 Apr 2025	0908 MW270D 250415	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW270D	16 Oct 2025	0908 MW270D 251016	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW270S	03 Mar 2017	MW270S 170303	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270S	07 Jun 2019	0908 MW270S 190607	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270S	25 May 2020	0908 MW270S 200525	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	0.01	<0.01	<0.02	<0.01	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.03	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270S	12 May 2021	0908 MW270S 210512	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.04	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270S	17 May 2022	0908 MW270S 220517	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	0.01	0.02	0.02	0.03	0.25	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.08	0.1	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW270S	16 May 2023	0908 MW270S 230516	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	Risk Zone C	0.02	0.03	0.04	0.04	0.07	0.36	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.12	0.1	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW270S	09 Aug 2023	0908 MW270S 230809	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	Risk Zone C	0.02	<0.01	0.04	0.04	0.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.09	0.08	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270S	22 Apr 2024	0908 MW270S 240422	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270S	20 Sep 2024	0908 MW270S 240920	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	0.04	0.03	0.07	0.1	0.44	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.11	0.11	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW270S	15 Apr 2025	0908 MW270S 250415	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	0.005	0.045	0.009	0.054	0.085	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	0.012	0.008	0.006	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW270S	16 Oct 2025	0908 MW270S 251016	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	0.013	0.034	0.027	0.061	0.243	<0.01	0.004	0.034	<0.002	-	<0.002	<0.005	0.02	0.042	0.047	0.018	0.004	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005		
MW280S	08 Mar 2017	MW280S GW 080317	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	07 Aug 2018	0908 MW280 180807	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	07 Sep 2018	0908 MW28D 180907	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	05 Oct 2018	0908 MW280S 181005	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	23 Jan 2019	0908 MW280S 190123	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	29 Mar 2019	0908 MW280S 190329	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	19 Jun 2019	0908 MW280 190618	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.002	<0.002	0.004	0.004	0.2	-	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW280S	25 Sep 2019	0908 MW280S 190925	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	0.0009	0.0012	0.0036	0.0048	0.0069	-	0.0005	<0.005	<0.005	-	<0.005	-	<0.002	<0.005	0.0007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.005	
MW280S	02 Dec 2019	0908 MW280S 191202	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	0.0008	0.0017	0.0035	0.0052	0.0076	-	<0.005	<0.005	<0.005	-	<0.005	-	<0.020	<0.005	0.0006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.005	
MW280S	02 Dec 2019	0908 QC103 191202	Field D	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	0.0009	0.002	0.0036	0.0056	0.0086	-	0.0005	<0.005	<0.005	-	<0.005	-	<0.020	<0.005	0.0006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.005	<0.001	<0.005	
MW280S	02 Dec 2019	0908 QC203 191202	Interlab D	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.001	0.0024	0.0035	0.0059	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.005	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.		

[illegible]

Table T5 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfo namide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS in Drinking Water (ADWG 2025) - note: only for Off-base locations	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational water quality guideline	10	0.008	0.03	2			1																										
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone A				190.3																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone B				5.67																													
Groundwater EPC from HHRA (AECOM, 2017) - Risk Zone C & D				0.05																													

	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Note	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW241D	23 Sep 2024	0908_QC206_240923	Interlab D	NSW_0908_PFASOMP_24	Outside Broader Management Zone	-		<0.002	0.011	<0.002	0.011	0.011	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241D	09 Apr 2025	0908_MW241D_250409	Normal	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.002	0.004	<0.002	0.004	0.004	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241D	08 Oct 2025	0908_MW241D_251008	Normal	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.002	0.004	<0.002	0.004	0.004	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241S	08 Feb 2017	MW241S_GW_08022017	Normal	NSW_0908_PFAS	Outside Broader Management Zone	-		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	27 Apr 2018	MW241S_GW_27042018	Normal	NSW_0908_PFAS	Outside Broader Management Zone	-		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	27 Nov 2018	0908_MW241S_181127	Normal	NSW_0908_PFAS	Outside Broader Management Zone	-		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	26 Nov 2020	0908_MW241_S_201126	Normal	NSW_0908_PFASOMP	Outside Broader Management Zone	-		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	20 May 2021	0908_MW241S_210520	Normal	NSW_0908_PFASOMP	Outside Broader Management Zone	-		<0.01	0.02	<0.02	0.02	0.02	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	15 Nov 2021	0908_MW241S_211115	Normal	NSW_0908_PFASOMP	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	24 May 2022	0908_MW241S_220524	Normal	NSW_0908_PFASOMP	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	10 Nov 2022	0908_MW241S_221110	Normal	NSW_0908_PFASOMP	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	10 Nov 2022	0908_QC115_221110	Field D	NSW_0908_PFASOMP	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	10 Nov 2022	0908_QC215_221110	Interlab D	NSW_0908_PFASOMP	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW241S	12 May 2023	0908_MW241S_230512	Normal	NSW_0908_PFASOMP_23	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	23 Nov 2023	0908_MW241S_231123	Normal	NSW_0908_PFASOMP_23	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	23 Apr 2024	0908_MW241S_240423	Normal	NSW_0908_PFASOMP_24	Outside Broader Management Zone	-	(**)	<0.01	<0.01	0.01	0.01	0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	31 Jul 2024	0908_MW241S_240731	Normal	NSW_0908_PFASOMP_24	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	23 Sep 2024	0908_MW241S_240923	Normal	NSW_0908_PFASOMP_24	Outside Broader Management Zone	-		<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	09 Apr 2025	0908_MW241S_250409	Normal	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241S	09 Apr 2025	0908_QC112_250409	Field D	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.002	0.002	<0.002	0.002	0.002	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241S	09 Apr 2025	0908_QC212_250409	Interlab D	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.001	0.002	<0.001	0.002	0.002	-	<0.001	<0.001	<0.001	<0.001	-	<0.002	-	<0.004	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.001	<0.002	<0.002	<0.01	<0.05	<0.002	<0.05	<0.1	<0.002	<0.5
MW241S	08 Oct 2025	0908_MW241S_251008	Normal	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.002	0.004	0.009	0.013	0.013	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241S	08 Oct 2025	0908_QC105_251008	Field D	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.002	<0.002	0.013	0.013	0.015	<0.01	<0.002	0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241S	08 Oct 2025	0908_QC205_251008	Interlab D	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.001	0.001	0.009	0.01	0.018	-	0.002	0.002	<0.001	<0.002	-	<0.002	-	0.005	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.001	<0.002	<0.002	<0.01	<0.05	<0.002	<0.05	<0.1	<0.002	<0.5
MW262D	01 Mar 2017	MW262D_GW_010317	Normal	NSW_0908_PFAS	Outside Broader Management Zone	-		<0.05	<0.05	<0.05	<0.05	0.05	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW262D	10 Jun 2025	0908_MW262D_250610	Normal	NSW_0908_PFASOMP_25	Outside Broader Management Zone	-		<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW262S	01 Mar 2017	MW262S_GW_010317	Normal	NSW_0908_PFAS	Outside Broader Management Zone	-		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<									

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides						
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluorooheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Table T6 - Historical Surface Water Analytical Results

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Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Table T6 - Historical Surface Water Analytical Results

							PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
							Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)
LOR							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	0.05	
PFAS NEMP 2025 Recreational water quality guideline							10			2																												
PFAS NEMP 2025 Freshwater 99%							19	(*)																														
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)								0.02																														
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water								1.78	1.48																													
Surface Water EPC from HHRA (AECOM, 2017) - Region 1								5.035	1.666																													
Surface Water EPC from HHRA (AECOM, 2017) - Region 2								1.47	1.009																													
Surface Water EPC from HHRA (AECOM, 2017) - Region 3								7.743	6.773																													
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																
SW055	19 Jan 2023	0908_SW055_220119	Normal	NSW_0908_WQMP_21	On-base	-	0.01	0.35	0.18	0.53	0.54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW055	18 Apr 2023	0908_SW055_230418	Normal	NSW_0908_WQMP_21	On-base	-	0.05	1.7	0.81	2.5	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	<0.02	-	-	-	-	-	-	-	-	-	
SW055	10 May 2023	0908_SW055_230510	Normal	NSW_0908_PFASOMP_23	On-base	-	0.05	0.9	0.88	1.78	2.26	-	0.07	0.1	0.04	-	<0.02	<0.1	0.04	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW055	05 Jul 2023	0908_SW055_230705	Normal	NSW_0908_WQMP_21	On-base	-	0.05	0.76	1	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW055	05 Jul 2023	0908_QC102_230705	Field_D	NSW_0908_WQMP_21	On-base	-	0.04	0.72	1	1.7	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW055	22 Nov 2023	0908_SW055_231122	Normal	NSW_0908_PFASOMP_23	On-base	-	0.05	0.55	0.71	1.26	1.69	-	0.1	0.06	0.04	-	<0.02	<0.1	0.02	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW055	17 Apr 2024	0908_SW055_240417	Normal	NSW_0908_PFASOMP_24	On-base	-	0.04	0.56	0.65	1.21	1.53	-	0.04	0.07	0.04	-	<0.02	-	<0.1	<0.02	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW055	24 Sep 2024	0908_SW055_240924	Normal	NSW_0908_PFASOMP_24	On-base	-	0.07	0.76	1.18	1.94	2.56	-	0.09	0.11	0.04	-	<0.02	<0.1	0.05	0.2	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW055	19 Mar 2025	0908_SW055_250319	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.06	0.61	0.88	1.49	2.05	0.03	0.08	0.08	0.05	<0.02	<0.02	<0.05	<0.1	0.05	0.18	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW055	19 Mar 2025	0908_QC101_250319	Field_D	NSW_0908_PFASMGMT_25	On-base	-	0.06	0.58	0.9	1.48	2.05	0.03	0.08	0.08	0.05	<0.02	<0.02	<0.05	<0.1	0.06	0.18	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW055	19 Mar 2025	0908_QC201_250319	Interlab_D	NSW_0908_PFASMGMT_25	On-base	-	0.06	0.6	1	1.6	2.2	-	0.09	0.11	0.06	-	<0.02	<0.02	0.04	0.17	0.03	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	
SW055	02 Apr 2025	0908_SW055_250402	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.06	1.72	0.69	2.41	2.96	<0.02	0.05	0.06	0.04	<0.02	<0.02	<0.05	<0.1	0.06	0.18	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW055	14 May 2025	0908_SW055_250514	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.06	3.04	0.79	3.83	4.34	<0.02	0.04	0.06	0.05	<0.02	<0.02	<0.05	<0.1	0.05	0.15	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW055	14 May 2025	0908_QC104_250514	Field_D	NSW_0908_PFASMGMT_25	On-base	-	0.07	2.63	0.72	3.35	3.8	<0.02	0.04	0.06	0.05	<0.02	<0.02	<0.05	<0.1	0.04	0.15	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW055	14 May 2025	0908_QC204_250514	Interlab_D	NSW_0908_PFASMGMT_25	On-base	-	0.06	2.7	0.77	3.4	4	-	0.05	0.07	0.06	-	<0.02	<0.02	-	0.03	0.06	0.15	0.05	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.07	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	
SW																																						

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides						
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluorohexanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</
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Table T6 - Historical Surface Water Analytical Results

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Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.52	10.8	10.3	21.1	28.7	-	1.48	1.85	0.72	-	<0.02	-	0.3	0.31	2.22	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012212203	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.52	10.8	10.3	21.1	28.7	-	1.48	1.85	0.72	-	<0.02	-	0.3	0.31	2.22	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012212303	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.45	9.05	9.09	18.1	25.7	-	1.22	1.57	0.43	-	<0.02	-	0.3	0.8	2.46	0.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220003	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.44	8.99	9.68	18.7	26.1	-	1.24	1.62	0.44	-	<0.02	-	0.3	0.76	2.29	0.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220103	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.42	8.62	9.57	18.2	25.2	-	1.14	1.58	0.41	-	<0.02	-	0.3	0.7	2.16	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220203	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.52	11.7	8.34	20	27	-	1.59	1.34	0.64	-	<0.02	-	0.2	0.31	2.15	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220303	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	1.08	17.9	17.9	35.8	48.4	-	2.24	2.37	1.22	-	<0.02	-	0.4	0.56	4.26	0.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220403	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.81	14.2	14.6	28.8	40.4	-	1.52	2.27	0.67	-	<0.02	-	0.5	1.28	4.05	0.53	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220503	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.69	12.7	11.6	24.3	34.4	-	1.34	1.98	0.67	-	<0.02	-	0.4	1.11	3.45	0.46	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220603	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.54	9.08	8.28	17.4	24.8	-	0.92	1.41	0.49	-	<0.02	-	0.3	0.78	2.61	0.34	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220703	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.41	7.38	6.84	14.2	20.2	-	0.88	1.15	0.4	-	<0.02	-	0.2	0.61	2.08	0.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220803	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.48	7.21	8.34	15.6	22.4	-	1.32	1.55	0.58	-	<0.02	-	0.2	0.3	2.14	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012220903	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.32	7.66	6.34	14	18.9	-	1.06	0.98	0.43	-	<0.02	-	0.2	0.28	1.46	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012221003	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.29	6.17	5.49	11.7	16	-	0.96	0.86	0.34	-	<0.02	-	0.2	0.25	1.31	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012221103	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.36	7.37	6.96	14.3	19.8	-	1.23	1.12	0.44	-	<0.02	-	0.2	0.31	1.6	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012221203	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.4	8.38	7.68	16.1	22	-	1.28	1.25	0.49	-	<0.02	-	0.2	0.34	1.78	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Dec 2020	0908_SW060_2012221303	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.41	8.58	7.42	16	21.8	-	1.24	1.17	0.5	-	<0.02	-	0.2	0.34	1.76	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101281647	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.32	7.59	4.71	12.3	16.1	-	0.69	0.86	0.45	-	<0.02	-	0.1	0.18	1.09	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101281747	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.26	6.81	4.28	11.1	14.2	-	0.58	0.65	0.34	-	<0.02	-	0.1	0.16	0.89	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101281847	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.25	6.2	3.9	10.1	13.1	-	0.56	0.64	0.32	-	<0.02	-	0.1	0.14	0.86	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101281947	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.29	6.5	4.3	10.8	14.3	-	0.64	0.75	0.38	-	<0.02	-	0.1	0.17	0.99	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101282047	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.3	6.72	4.41	11.1	14.6	-	0.63	0.75	0.4	-	<0.02	-	0.1	0.17	0.99	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101282147	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.34	7.64	5.26	12.9	16.9	-	0.76	0.87	0.48	-	<0.02	-	0.1	0.2	1.11	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101282247	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.37	8.6	5.43	14	18.3	-	0.72	1.02	0.51	-	<0.02	-	0.1	0.2	1.2	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101282347	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.42	9.34	6.3	15.6	20.6	-	0.78	1.08	0.63	-	<0.02	-	0.2	0.24	1.36	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_QC104_210128	Field_D	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.3	7.4	3.5	11.9	15.8	-	0.76	0.78	0.39	-	<0.02	-	0.2	0.19	1.1	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_QC204_210128	Interlab_D	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.2	4.3	3.4	7.7	-	-	0.55	0.47	0.19	<0.01	<0.01	<0.02	0.12	0.14	0.7	0.09	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.02	<0.05	<0.02	<0.01	<0.05
SW060	29 Jan 2021	0908_SW060_210129	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.52	12.1	7.47	19.6	25.6	-	0.96	1.25	0.74	-	<0.02	-	0.2	0.35	1.81	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290047	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.48	10.2	6.72	16.9	22.4	-	0.83	1.29	0.68	-	<0.02	-	0.2	0.26	1.52	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021																																						

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids									PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.81	10.5	4.21	14.7	21.7	-	0.72	1.1	0.87	-	<0.02	-	0.3	0.47	2.43	0.33	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	20 Aug 2021	0908_SW060_210820	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.81	10.5	4.21	14.7	21.7	-	0.72	1.1	0.87	-	<0.02	-	0.3	0.47	2.43	0.33	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	27 Sep 2021	0908_SW060_210927	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.66	13	8.29	21.3	28.5	-	0.86	1.14	0.85	-	<0.02	-	<0.1	0.49	2.84	0.34	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	11 Oct 2021	0908_SW060_211011	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.79	18	8.9	26.9	34.8	0.38	0.93	0.99	1	0.04	<0.01	-	0.38	0.55	2.5	0.34	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
SW060	25 Oct 2021	0908_SW060_211025	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.85	16.3	8.41	24.7	34.2	-	1.07	1.42	0.94	-	<0.02	-	0.5	0.77	3.5	0.43	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	15 Nov 2021	0908_SW060_211115	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.62	13.4	8.04	21.4	29.7	-	1.22	1.14	0.63	-	<0.02	-	0.4	0.6	3.29	0.34	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	16 Nov 2021	0908_SW060_211116	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.67	14	9.7	23.7	31.03	0.33	0.79	1.1	0.9	0.03	<0.01	-	0.41	0.5	2.3	0.3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
SW060	18 Jan 2022	0908_SW060_220118	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.2	7.4	3	10	13	-	0.33	0.34	0.32	-	<0.02	-	0.06	0.1	0.65	0.09	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW060	07 Mar 2022	0908_SW060_220307	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.13	2.9	2.5	5.4	7.2	-	0.28	0.34	0.13	-	<0.02	-	0.1	0.1	0.54	0.09	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW060	11 Apr 2022	0908_SW060_220411	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.01	0.28	0.16	0.44	0.53	-	0.01	0.01	0.02	-	<0.02	-	<0.02	<0.02	0.04	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW060	18 May 2022	0908_SW060_220518	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.31	7.21	3.9	11.1	14.1	-	0.35	0.5	0.35	-	<0.02	-	0.1	0.18	1.04	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	12 Jul 2022	0908_SW060_220712	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW060	19 Jul 2022	0908_SW060_220719	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.3	8.6	2.3	11	13	-	0.23	0.24	0.28	-	<0.02	-	0.06	0.1	0.57	0.1	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW060	17 Oct 2022	0908_SW060_221017	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.58	19	5.5	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW060	09 Nov 2022	0908_SW060_221109	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.6	16.3	6.9	23.2	28.6	-	0.56	0.92	0.71	-	<0.02	-	0.2	0.3	1.8	0.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	
SW060	09 Nov 2022	0908_QC109_221109	Field_D	NSW_0908_PFA	Primary Management Zone	Region 3	0.62	16.1	7.12	23.2	28.9	-	0.61	0.68	0.75	-	<0.02	-	0.2	0.38	2.14	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	09 Nov 2022	0908_QC209_221109	Interlab_D	NSW_0908_PFA	Primary Management Zone	Region 3	0.57	16	6	22	27	-	0.6	0.72	0.62	-	<0.02	-	0.21	0.34	1.7	0.25	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW060	20 Jan 2023	0908_SW060_230120	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.17	8	1.8	9.8	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW060	21 Apr 2023	0908_SW060_230421	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.34	6.8	11	17	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW060	11 May 2023	0908_SW060_230511	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.79	15	13.4	28.4	38.7	-	1.66	2.32	0.8	-	<0.02	-	0.4	0.57	3.35	0.44	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	
SW060	06 Jul 2023	0908_SW060_230706	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	1.2	19	14	34	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	
SW060	23 Nov 2023	0908_SW060_231123	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.09	1.2	1.96	3.16	4.4	-	0.22	0.22	0.12	-	<0.02	-	<0.1	0.07	0.47	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	22 Apr 2024	0908_SW060_240422	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.49	9.73	10.4	20.1	28	-	1.19	1.85	0.62	-	<0.02	-	0.4	0.44	2.15	0.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	19 Sep 2024	0908_SW060_240919	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.76	17.8	8.1	25.9	32.4	-	0.63	0.84	0.63	-	<0.02	-	0.3	0.49	2.25	0.38	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	
SW060	19 Sep 2024	0908_QC101_240919	Field_D	NSW_0908_PFA	Primary Management Zone	Region 3	0.85	17.8	9.12	26.9	34.3	-	0.79	1.31	0.92	-	<0.02	-	0.3	0.42	2.16	0.33	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	19 Sep 2024	0908_QC201_240919	Interlab_D	NSW_0908_PFA	Primary Management Zone	Region 3	0.78	21	11	32	39	-	0.82	1.1	1.1	-	<0.02	-	0.22	0.4	1.9	0.35	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW060	02 Apr 2025	0908_SW060_250402	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.4	9.56	9.39	19	25	0.48	1.08	1.17	0.49	<0.02	<0.02	<0.05	0.2	0.28	1.66	0.24	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	07 Oct 2025	0908_SW060_251007	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.96	27.1	10.4	37.5	45	0.25	0.72	1.11	1.18	0.08	<0.02	<0.05	0.3	0.44	2.08	0.36	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	16 Dec 2020	0908_SW333_201216	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.31	1.49	4.76	6.25	10.9	-	0.78	0.99	0.32	-	<0.02	-	0.2	0.3	1.6	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	22 Apr 2024	0908_SW333_240422	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.04	0.37	1.1	1.47	2.17	-	0.12	0.18	0.06	-	<0.02	-	<0.1	0.03	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	19 Sep 2024	0908_SW333_240919	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.07	0.81	0.94	1.75	2.94	-	0.08	0.12	0.09	-	<0.02	-	<0.1	0.04	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.49	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	19 Mar 2025	0908_SW333_250319	Normal	NSW_0908_PFA	Primary Management Zone	Region 3	0.1																																

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids									PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFPOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFPOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.01	0.04	<0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	24 Mar 2017	MD1_AS_240317_0445	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.05	<0.02	0.07	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	24 Mar 2017	MD1_AS_240317_0500	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.09	0.02	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	24 Mar 2017	MD1_AS_240317_0600	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.09	0.02	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	24 Mar 2017	MD1_AS_240317_0615	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.04	<0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	24 Mar 2017	MD1_AS_240317_0630	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.04	<0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	24 Mar 2017	MD1_AS_240317_0645	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.03	<0.02	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	31 Mar 2017	MD1_AS_310317_2345	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	1.06	0.45	1.51	1.74	-	0.05	0.05	0.02	-	<0.02	-	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	31 Mar 2017	MD1_SW_310317	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.33	0.14	0.47	0.49	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	01 Apr 2017	MD1_AS_010417_0000	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.28	0.09	0.37	0.39	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	01 Apr 2017	MD1_AS_010417_0015	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.27	0.07	0.34	0.36	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	01 Apr 2017	MD1_AS_010417_0030	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.23	0.06	0.29	0.29	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	01 Apr 2017	MD1_AS_010417_0045	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.22	0.06	0.28	0.28	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_545	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	0.68	0.34	1.02	1.17	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_600	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	0.84	0.3	1.14	1.29	-	0.03	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_615	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.37	0.12	0.49	0.52	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_630	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.29	0.1	0.39	0.39	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_745	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.16	0.05	0.21	0.21	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_800	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.05	<0.02	0.05	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_815	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.05	<0.02	0.05	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_830	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	0.08	<0.02	0.08	0.61	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.51	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_845	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.09	0.02	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_1430	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.11	0.02	0.13	0.13	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_1445	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.03	0.72	0.26	0.98	1.63	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	0.5	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_1700	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	1.05	0.54	1.59	1.83	-	0.06	0.06	0.03	-	<0.02	-	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_1715	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.38	0.27	1.07	1.7	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	0.52	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	04 Apr 2017	MD1_AS_040417_1730	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.39	0.1	0.49	1.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.54	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	05 Apr 2017	MD1_SW_050417	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.03	0.8	0.38	1.18	1.34	-	0.03	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05</												

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.01	0.49	0.14	0.63	0.65	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	21 Dec 2020	0908_SW001_2012211810	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.49	0.14	0.63	0.65	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	21 Dec 2020	0908_SW001_2012211910	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.69	0.16	0.85	0.89	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	21 Dec 2020	0908_SW001_2012212010	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.57	0.14	0.71	0.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	21 Dec 2020	0908_SW001_2012212110	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.62	0.14	0.76	0.79	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	21 Dec 2020	0908_SW001_2012212210	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.59	0.13	0.72	0.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	21 Dec 2020	0908_SW001_2012212310	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.44	0.1	0.54	0.54	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	22 Dec 2020	0908_SW001_2012220010	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.45	0.09	0.54	0.54	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	22 Dec 2020	0908_SW001_2012220110	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.27	0.06	0.33	0.33	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220210	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.36	0.1	0.46	0.46	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220310	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.46	0.14	0.6	0.62	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220410	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.62	0.18	0.8	0.84	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220510	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	0.79	0.25	1.04	1.12	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220610	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.04	0.31	1.35	1.46	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220710	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.17	0.32	1.49	1.6	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220810	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.09	0.34	1.43	1.56	-	<0.02	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101281650	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	0.96	0.28	1.24	1.33	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101281750	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	0.94	0.3	1.24	1.33	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101281850	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.48	0.13	0.61	0.64	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101281950	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.38	0.1	0.48	0.48	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101282050	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.43	0.12	0.55	0.57	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101282150	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	<0.01	0.35	0.1	0.45	0.45	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101282250	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.43	0.14	0.57	0.61	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_SW001_2101282350	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.52	0.14	0.66	0.7	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_QC102_210128	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	0.89	0.28	1.17	1.25	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	28 Jan 2021	0908_QC202_210128	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.019	0.91	0.26	1.17	-	-	0.01	0.011	0.014	<0.01	<0.01	<0.02	<0.05	<0.02	0.038	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05
SW001	29 Jan 2021	0908_SW001_210129	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.03	0.29	1.32	1.43	-	<0.02	0.02	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	29 Jan 2021	0908_SW001_2101290050	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	0.64	0.19	0.83	0.87	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	29 Jan 2021	0908_SW001_2101290150	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	0.68	0.21	0.89	0.95	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	29 Jan 2021	0908_SW001_2101290250	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	0.76	0.27	1.03	1.09	-	<0.02	<0.																									

Table T6 - Historical Surface Water Analytical Results

[illegible][illegible]

Table T6 - Historical Surface Water Analytical Results

[illegible][illegible]

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.02	1.74	0.16	1.9	2.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.03	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	22 Dec 2020	0908_SW007_2012220750	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.74	0.16	1.9	2.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	22 Dec 2020	0908_SW007_2012220850	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	2.37	0.23	2.6	2.78	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	22 Dec 2020	0908_SW007_2012220950	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.03	2.74	0.26	3	3.24	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	22 Dec 2020	0908_SW007_2012221050	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	2.94	0.32	3.26	3.54	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.04	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	22 Dec 2020	0908_SW007_2012221150	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	3.37	0.36	3.73	4.08	-	<0.02	0.02	0.04	-	<0.02	-	<0.1	0.04	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	22 Dec 2020	0908_SW007_2012221250	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.05	3.66	0.42	4.08	4.47	-	<0.02	0.03	0.04	-	<0.02	-	<0.1	0.05	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	22 Dec 2020	0908_SW007_2012221350	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	4.76	0.53	5.29	5.77	-	0.02	0.03	0.05	-	<0.02	-	<0.1	0.06	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_210129	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.1	7.3	0.86	8.16	8.73	-	0.03	0.05	0.07	-	<0.02	-	<0.1	0.09	0.2	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101291400	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.13	9.76	1.35	11.1	12	-	0.05	0.08	0.14	-	<0.02	-	<0.1	0.1	0.3	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101291500	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.12	9.88	1.22	11.1	11.9	-	<0.02	0.07	0.12	-	<0.02	-	<0.1	0.15	0.27	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101291600	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.12	10.2	1.08	11.3	12	-	0.02	0.06	0.12	-	<0.02	-	<0.1	0.06	0.24	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101291700	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.1	8.36	0.89	9.25	9.79	-	<0.02	0.05	0.1	-	<0.02	-	<0.1	0.05	0.2	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101291800	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.08	6.9	0.67	7.57	8.1	-	<0.02	0.03	0.08	-	<0.02	-	<0.1	0.04	0.27	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101291900	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	6.07	0.54	6.61	6.95	-	<0.02	0.03	0.05	-	<0.02	-	<0.1	0.05	0.13	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101292000	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.07	5.58	0.59	6.17	6.56	-	<0.02	0.03	0.06	-	<0.02	-	<0.1	0.06	0.14	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101292100	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	5.83	0.6	6.43	6.8	-	0.02	0.03	0.06	-	<0.02	-	<0.1	0.04	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101292200	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	5.52	0.53	6.05	6.4	-	<0.02	0.03	0.06	-	<0.02	-	<0.1	0.05	0.13	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_SW007_2101292300	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	4.13	0.44	4.57	4.81	-	<0.02	0.02	0.04	-	<0.02	-	<0.1	0.02	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_QC103_210129	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.11	9.64	1.16	10.8	11.5	-	0.04	0.07	0.1	-	<0.02	-	<0.1	0.08	0.24	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	29 Jan 2021	0908_QC203_210129	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.094	7.2	0.94	8.14	-	-	0.033	0.051	0.061	<0.01	<0.01	<0.02	0.057	0.09	0.21	0.044	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SW007	30 Jan 2021	0908_SW007_2101300000	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	5.13	0.61	5.74	6.17	-	<0.02	0.03	0.06	-	<0.02	-	<0.1	0.05	0.2	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300100	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	6.23	0.67	6.9	7.32	-	<0.02	0.04	0.06	-	<0.02	-	<0.1	0.08	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300200	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.07	6.14	0.72	6.86	7.4	-	<0.02	0.04	0.07	-	<0.02	-	<0.1	0.06	0.27	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300300	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	7.16	0.86	8.02	8.65	-	0.02	0.05	0.08	-	<0.02	-	<0.1	0.04	0.31	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300400	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	6.78	0.85	7.63	8.21	-	<0.02	0.04	0.08	-	<0.02	-	<0.1	0.04	0.29	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300500	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	7.36	0.95	8.31	9.04	-	0.02	0.06	0.09	-	<0.02	-	<0.1	0.08	0.35	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300600	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	7.7	0.88	8.58	9.23	-	0.03	0.05	0.09	-	<0.02	-	<0.1	0.04	0.31	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300700	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	7.49	0.87	8.36	8.88	-	<0.02	0.05	0.08	-	<0.02	-	<0.1	0.07	0.19	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<										

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids									PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.16	13	1.57	14.6	16	-	0.05	0.11	0.21	-	<0.02	-	<0.1	0.16	0.58	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW007	24 Apr 2024	0908_SW007_240424	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.16	13	1.57	14.6	16	-	0.05	0.11	0.21	-	<0.02	-	<0.1	0.16	0.58	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW007	05 Sep 2024	0908_SW007_240905	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.05	2.32	0.64	2.96	3.36	<0.02	0.05	0.08	0.07	<0.02	<0.02	<0.05	<0.1	0.03	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW007	25 Sep 2024	0908_SW007_240925	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.05	4.85	0.7	5.55	5.85	-	<0.02	0.03	0.04	-	<0.02	-	<0.1	0.04	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	20 Nov 2024	0908_SW007_241120	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.13	9.9	1.09	11	11.8	<0.02	0.04	0.06	0.12	0.05	<0.02	<0.05	<0.1	0.09	0.3	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW007	02 Apr 2025	0908_SW007_250402	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.08	7.67	0.76	8.43	8.99	<0.02	0.03	0.04	0.08	0.05	<0.02	<0.05	<0.1	0.05	0.19	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW007	01 Jul 2025	0908_SW007_2507010230	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.52	0.05	0.57	0.57	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Jul 2025	0908_SW007_2507010645	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.64	0.09	0.73	0.73	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Jul 2025	0908_SW007_2507011430	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.83	0.12	0.95	0.95	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Jul 2025	0908_SW007_2507011830	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.96	0.13	1.09	1.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Jul 2025	0908_SW007_2507012300	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.84	0.12	0.96	0.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Jul 2025	0908_QC102_250701	Field_D	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.52	0.04	0.56	0.56	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Jul 2025	0908_QC103_250701	Field_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.91	0.09	1	1.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Jul 2025	0908_QC202_250701	Interlab_D	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.62	0.05	0.67	0.67	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW007	01 Jul 2025	0908_QC203_250701	Interlab_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	1	0.11	1.1	1.2	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW007	02 Jul 2025	0908_SW007_250701_15	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.67	0.08	0.75	0.75	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	02 Jul 2025	0908_SW007_250702_17	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.94	0.1	1.04	1.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	02 Jul 2025	0908_SW007_250702_19	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	1.21	0.12	1.33	1.37	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	02 Jul 2025	0908_SW007_250702_20	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	1.16	0.12	1.28	1.33	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	02 Jul 2025	0908_SW007_2507011230	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.69	0.12	0.81	0.81	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Aug 2025	0908_SW007_2508011345	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	2.27	0.2	2.47	2.53	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Aug 2025	0908_QC100_250801	Field_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	2.51	0.24	2.75	2.83	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	01 Aug 2025	0908_QC200_250801	Interlab_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	1.2	0.12	1.3	1.4	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW007	02 Aug 2025	0908_SW007_2508021500	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	1.13	0.12	1.25	1.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	02 Aug 2025	0908_SW007_2508022100	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	1.09	0.14	1.23	1.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	02 Aug 2025	0908_SW007_2508022300	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.88	0.11	0.99	1.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	03 Aug 2025	0908_SW007_2508030300	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.82	0.1	0.92	0.95	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	03 Aug 2025	0908_SW007_2508030900	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.8	0.1	0.9	0.93	<0.02	<0.02	<0.02	<0.02	<0.02	<0																							

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.04	1.56	0.58	2.14	2.4	-	0.02	0.04	0.04	-	<0.02	-	<0.1	0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW009	23 Sep 2024	0908_SW009_240923	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 1	0.04	1.56	0.58	2.14	2.4	-	0.02	0.04	0.04	-	<0.02	-	<0.1	0.03	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW009	23 Sep 2024	0908_QC104_240923	Field_D	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 1	0.05	1.46	0.61	2.07	2.39	-	0.03	0.04	0.07	-	<0.02	-	<0.1	0.03	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW009	23 Sep 2024	0908_QC204_240923	Interlab_D	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 1	0.04	1.5	0.62	2.1	2.4	-	0.03	0.04	0.08	-	<0.02	-	<0.02	0.02	0.08	0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5
SW009	02 Apr 2025	0908_SW009_250402	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Region 1	0.04	3.36	0.52	3.88	4.18	<0.02	0.03	0.03	0.04	<0.02	<0.02	<0.05	<0.1	0.03	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW009	07 Oct 2025	0908_SW009_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Region 1	0.72	18.8	6.03	24.8	29.4	0.14	0.42	0.52	0.65	0.1	<0.02	<0.05	0.2	0.29	1.32	0.23	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	12 Feb 2016	MD10_SW_12022016	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.06	1.38	1.4	2.78	4.28	-	0.11	0.12	0.1	-	<0.02	-	<0.1	0.05	0.22	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	12 Feb 2016	QC103_SW_12022016	Field_D	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.05	1.34	1.38	2.72	4.33	-	0.11	0.12	0.1	-	<0.02	-	<0.1	0.04	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.1	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	23 Mar 2017	MD10_SW_230317	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.04	1.17	0.54	1.71	1.98	-	0.04	0.04	0.05	-	<0.02	-	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	07 Dec 2018	0908_MD10_SW_181207	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.03	0.82	0.43	1.25	1.53	-	0.04	0.05	0.04	-	<0.02	-	<0.1	0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	13 Jun 2019	0908_MD10_SW_190613	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.26	0.28	0.54	0.59	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	06 Nov 2019	0908_MD10_SW_191106	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	1.11	0.66	1.77	2.36	-	0.07	0.08	0.04	-	<0.02	-	<0.1	0.1	0.22	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	19 Jun 2020	0908_SW011_200619	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.08	3.31	1.01	4.32	5.13	-	0.09	0.11	0.1	-	<0.02	-	0.1	0.06	0.23	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	04 Dec 2020	0908_SW011_201204	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.05	2.19	0.7	2.89	3.28	-	0.05	0.07	0.06	-	<0.02	-	<0.1	0.02	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	04 Dec 2020	0908_QC108_201204	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.05	2.14	0.73	2.87	3.28	-	0.06	0.07	0.07	-	<0.02	-	<0.1	0.02	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	04 Dec 2020	0908_QC208_201204	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.044	2.4	0.78	3.18	-	-	0.053	0.06	0.047	<0.01	<0.01	<0.02	<0.05	0.037	0.13	0.022	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
SW011	26 May 2021	0908_SW011_210526	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.03	1.41	0.45	1.86	2.08	-	0.03	0.04	0.04	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	11 May 2023	0908_SW011_230511	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 1	0.05	2.96	0.58	3.54	3.86	-	0.03	0.04	0.05	-	<0.02	-	<0.1	0.03	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	27 Nov 2023	0908_SW011_231127	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 1	0.02	0.48	0.2	0.68	0.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	23 Apr 2024	0908_SW011_240423	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 1	0.01	0.8	0.6	1.4	1.52	-	0.02	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	26 Sep 2024	0908_SW011_240926	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 1	0.03	1.4	0.44	1.84	2.01	-	<0.02	0.03	0.03	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	07 Apr 2025	0908_SW011_250407	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Region 1	0.03	1.84	0.42	2.26	2.46	<0.02	0.02	0.03	0.04	<0.02	<0.02	<0.05	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	07 Apr 2025	0908_QC110_250407	Field_D	NSW_0908_PFASOMP_25	Secondary Management Zone	Region 1	0.03	1.74	0.43	2.17	2.35	<0.02	0.02	0.02	0.04	<0.02	<0.02	<0.05	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW011	07 Apr 2025	0908_QC210_250407	Interlab_D	NSW_0908_PFASOMP_25	Secondary Management Zone	Region 1	0.04	2	0.49	2.5	2.7	-	0.02	0.03	0.04	-	<0.02	-	<0.02	<0.02	0.08	0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.05	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5
SW019	30 Jan 2017	TC12_SW_300117	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 2	<0.01	<0.01	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW019	09 Feb 2017	TC12_SW_090217	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 2	<0.01	0.27	0.17	0.44	0.46	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW019	16 Feb 2017	TC12_SW_16022017	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 2	<0.01	0.02	0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW019	24 Feb 2017	TC12_SW_240217	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 2	<0.01	0.17	0.05	0.22	0.24	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW019	02 Mar 2017	TC12_SW_020317	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 2	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02																				

Table T6 - Historical Surface Water Analytical Results

[illegible][illegible]

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids									PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.01	0.64	0.33	0.97	1.06	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1330	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.01	0.64	0.33	0.97	1.06	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1345	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.78	0.43	1.21	1.35	-	0.03	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1400	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.75	0.42	1.17	1.29	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1415	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.68	0.36	1.04	1.15	-	0.03	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1430	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.62	0.33	0.95	1.04	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	09 Mar 2017	DD2_SW_090317	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.01	0.34	0.58	0.92	1.28	-	0.13	0.1	<0.02	-	<0.02	-	<0.1	<0.02	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	16 Mar 2017	DD2_SW_20170316	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.01	0.26	1.22	1.48	2.15	-	0.22	0.18	<0.02	-	<0.02	-	<0.1	0.04	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_200317_0245	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.04	0.7	1.51	2.21	3.08	-	0.32	0.27	0.05	-	<0.02	-	<0.1	<0.02	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_0300	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.67	1.46	2.13	2.93	-	0.31	0.26	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_0945	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.65	1.31	1.96	2.75	-	0.31	0.26	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1000	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.59	1.35	1.94	2.73	-	0.31	0.26	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1015	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.62	1.32	1.94	2.74	-	0.31	0.26	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1030	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.52	1.31	1.83	2.63	-	0.31	0.26	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1045	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.61	1.36	1.97	2.76	-	0.31	0.26	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1100	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.54	1.38	1.92	2.7	-	0.32	0.25	0.04	-	<0.02	-	<0.1	<0.02	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1115	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.52	1.37	1.89	2.69	-	0.31	0.28	0.04	-	<0.02	-	<0.1	<0.02	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1145	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.58	1.34	1.92	2.74	-	0.32	0.27	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1215	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.61	1.36	1.97	2.79	-	0.32	0.28	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1245	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.02	0.58	1.4	1.98	2.82	-	0.33	0.28	0.04	-	<0.02	-	<0.1	<0.02	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	20 Mar 2017	DD2_AS_220317_1315	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.67	1.37	2.04	2.87	-	0.33	0.26	0.04	-	<0.02	-	<0.1	<0.02	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2130	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.57	1.41	1.98	2.77	-	0.29	0.25	0.04	-	<0.02	-	<0.1	<0.02	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2145	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.04	0.64	1.54	2.18	3.03	-	0.3	0.26	0.05	-	<0.02	-	<0.1	<0.02	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2200	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.59	1.45	2.04	2.86	-	0.29	0.26	0.05	-	<0.02	-	<0.1	<0.02	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2215	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.04	0.66	1.5	2.16	3.02	-	0.3	0.28	0.05	-	<0.02	-	<0.1	<0.02	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2230	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.56	1.46	2.02	2.82	-	0.3	0.25	0.04	-	<0.02	-	<0.1	<0.02	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2245	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.6	1.41	2.01	2.81	-	0.29	0.25	0.05	-	<0.02	-	<0.1	<0.02	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2300	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.61	1.4	2.01	2.78	-	0.29	0.25	0.04	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	21 Mar 2017	DD2_AS_210317_2315	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 3	0.03	0.63	1.35	1.98	2.75	-	0.28	0.24	0.04	-	<0.02	-	<0.1	<0.02	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.0.							

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids									PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.07	0.92	1.91	2.83	3.78	-	0.17	0.19	0.07	-	<0.02	-	<0.1	0.07	0.34	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012220900	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.07	0.92	1.91	2.83	3.78	-	0.17	0.19	0.07	-	<0.02	-	<0.1	0.07	0.34	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221000	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.07	0.81	2.04	2.85	3.83	-	0.18	0.2	0.07	-	<0.02	-	<0.1	0.07	0.35	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221100	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.07	0.77	2.04	2.81	3.81	-	0.18	0.2	0.07	-	<0.02	-	<0.1	0.07	0.36	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221200	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.08	0.95	2.17	3.12	4.19	-	0.2	0.21	0.08	-	<0.02	-	<0.1	0.08	0.38	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221300	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.08	0.95	2.23	3.18	4.29	-	0.2	0.22	0.08	-	<0.02	-	<0.1	0.08	0.4	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221400	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.09	1.07	2.56	3.63	4.87	-	0.22	0.24	0.09	-	<0.02	-	<0.1	0.09	0.45	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221500	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.08	1	2.19	3.19	4.31	-	0.2	0.21	0.08	-	<0.02	-	<0.1	0.08	0.42	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221600	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.75	1.5	2.25	3.01	-	0.14	0.16	0.06	-	<0.02	-	<0.1	0.06	0.26	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221700	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.71	1.37	2.08	2.75	-	0.12	0.14	0.05	-	<0.02	-	<0.1	0.04	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221800	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.04	0.57	1.17	1.74	2.31	-	0.1	0.12	0.05	-	<0.02	-	<0.1	0.04	0.2	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012221900	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.03	0.63	1.19	1.82	2.37	-	0.1	0.12	0.04	-	<0.02	-	<0.1	0.04	0.2	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012222000	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.04	0.55	1.03	1.58	2.07	-	0.09	0.1	0.04	-	<0.02	-	<0.1	0.03	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012222100	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.03	0.55	0.99	1.54	2.02	-	0.09	0.1	0.04	-	<0.02	-	<0.1	0.03	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012222200	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.04	0.61	1.16	1.77	2.31	-	0.1	0.11	0.04	-	<0.02	-	<0.1	0.04	0.19	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	22 Dec 2020	0908_SW059_2012222300	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.02	0.53	0.97	1.5	1.94	-	0.08	0.1	0.03	-	<0.02	-	<0.1	0.03	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	23 Dec 2020	0908_SW059_2012230000	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.03	0.52	0.97	1.49	1.95	-	0.08	0.1	0.04	-	<0.02	-	<0.1	0.03	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	23 Dec 2020	0908_SW059_2012230100	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.03	0.66	1.2	1.86	2.4	-	0.1	0.12	0.04	-	<0.02	-	<0.1	0.04	0.19	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101281630	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.06	0.96	1.59	2.55	3.28	-	0.11	0.16	0.07	-	<0.02	-	<0.1	0.04	0.26	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101281730	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.06	0.86	1.33	2.19	2.85	-	0.11	0.14	0.06	-	<0.02	-	<0.1	0.03	0.23	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101281830	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.74	1.2	1.94	2.49	-	0.09	0.12	0.05	-	<0.02	-	<0.1	0.02	0.19	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101281930	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.78	1.17	1.95	2.5	-	0.08	0.12	0.05	-	<0.02	-	<0.1	0.02	0.2	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101282030	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.97	1.29	2.26	2.87	-	0.1	0.13	0.06	-	<0.02	-	<0.1	0.03	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101282130	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.89	1.09	1.98	2.52	-	0.08	0.12	0.05	-	<0.02	-	<0.1	0.02	0.19	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101282230	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	1.07	1.27	2.34	2.95	-	0.1	0.13	0.06	-	<0.02	-	<0.1	0.02	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_SW059_2101282330	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	1.12	1.31	2.43	3.05	-	0.09	0.14	0.06	-	<0.02	-	<0.1	0.03	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_QC105_210128	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.06	0.83	1.39	2.22	2.89	-	0.12	0.14	0.06	-	<0.02	-	<0.1	0.02	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_QC106_210128	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.82	1.25	2.07	2.7	-	0.11	0.13	0.06	-	<0.02	-	<0.1	0.04	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	28 Jan 2021	0908_QC107_210128	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05																																	

Table T6 - Historical Surface Water Analytical Results

[illegible][illegible]

Table T6 - Historical Surface Water Analytical Results

[illegible][illegible]

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.02	1.06	0.22	1.28	1.34	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221820	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.06	0.22	1.28	1.34	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221920	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.03	1.23	0.31	1.54	1.7	-	0.02	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012222020	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.97	0.23	1.2	1.26	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012222120	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.84	0.23	1.07	1.15	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012222220	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.9	0.25	1.15	1.23	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012223020	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.91	0.24	1.15	1.23	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	23 Dec 2020	0908_SW005_2012230020	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.96	0.25	1.21	1.29	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	23 Dec 2020	0908_SW005_2012230120	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.96	0.26	1.22	1.32	-	0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	23 Dec 2020	0908_SW005_2012230220	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.33	0.35	1.68	1.84	-	0.02	0.03	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	23 Dec 2020	0908_SW005_2012230320	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.03	1.42	0.37	1.79	1.97	-	0.02	0.03	0.03	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	23 Dec 2020	0908_SW005_2012230420	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.12	0.32	1.44	1.59	-	0.02	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_210129	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.07	0.28	1.35	1.55	-	<0.02	0.02	0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	29 Jan 2021	0908_SW005_2101291240	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.06	0.23	1.29	1.38	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101291340	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.05	0.23	1.28	1.35	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101291440	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.97	0.21	1.18	1.24	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101291540	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.08	0.24	1.32	1.41	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101291640	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.04	0.21	1.25	1.31	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101291740	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.06	0.23	1.29	1.36	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101291840	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.92	0.2	1.12	1.18	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101291940	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.99	0.22	1.21	1.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101292040	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.95	0.21	1.16	1.22	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101292140	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.94	0.2	1.14	1.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101292240	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.87	0.2	1.07	1.13	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_SW005_2101292340	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.96	0.21	1.17	1.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_QC101_210129	Field_D	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.12	0.24	1.36	1.44	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	29 Jan 2021	0908_QC201_210129	Interlab_D	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.013	0.93	0.19	1.12	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	0.03	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05
SW005	30 Jan 2021	0908_SW005_2101300040	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.95	0.21	1.16	1.22	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<															

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.01	0.37	0.09	0.46	0.46	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	09 May 2023	0908_SW005_230509	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Region 1	<0.01	0.22	0.09	0.31	0.31	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW005	09 May 2023	0908_QC211_230509	Interlab_D	NSW_0908_PFASOMP_23	Broader Management Zone	Region 1	<0.01	0.25	0.11	0.36	0.39	-	<0.01	0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW005	21 Nov 2023	0908_SW005_231121	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Region 1	<0.01	0.04	<0.01	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	16 Apr 2024	0908_SW005_240416	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Region 1	0.01	0.66	0.16	0.82	0.87	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	16 Apr 2024	0908_QC103_240416	Field_D	NSW_0908_PFASOMP_24	Broader Management Zone	Region 1	0.01	0.8	0.16	0.96	1.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	16 Apr 2024	0908_QC203_240416	Interlab_D	NSW_0908_PFASOMP_24	Broader Management Zone	Region 1	0.02	0.86	0.21	1.1	1.2	-	0.01	0.01	0.02	-	<0.02	-	<0.02	<0.02	0.06	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW005	27 Sep 2024	0908_SW005_240927	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Region 1	0.02	0.54	0.22	0.76	0.82	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	02 Apr 2025	0908_SW005_250402	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Region 1	<0.01	0.71	0.16	0.87	0.89	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	07 Oct 2025	0908_SW005_251007	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Region 1	0.02	0.98	0.27	1.25	1.35	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	07 Oct 2025	0908_QC101_251007	Field_D	NSW_0908_PFASOMP_25	Broader Management Zone	Region 1	0.02	0.88	0.27	1.15	1.24	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	07 Oct 2025	0908_QC201_251007	Interlab_D	NSW_0908_PFASOMP_25	Broader Management Zone	Region 1	0.02	0.97	0.24	1.2	1.3	-	0.02	0.02	0.03	-	<0.02	-	<0.02	<0.02	0.03	0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW014	20 Dec 2016	MD14_SW_161220	Normal	NSW_0908_PFAS	Broader Management Zone	Region 1	<0.01	0.02	<0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	18 Apr 2018	MD14_SW_18042018	Normal	NSW_0908_PFAS	Broader Management Zone	Region 1	<0.01	0.14	<0.02	0.16	0.14	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	18 Apr 2018	MD14_SW_18042018	Normal	NSW_0908_PFAS	Broader Management Zone	Region 1	-	-	-	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SW014	06 Dec 2018	0908_MD14_SW_181206	Normal	NSW_0908_PFAS	Broader Management Zone	Region 1	0.02	0.45	0.21	0.66	0.76	-	<0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	13 Jun 2019	0908_MD14_SW_190613	Normal	NSW_0908_PFAS	Broader Management Zone	Region 1	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	13 Jun 2019	0908_QC120_190613	Field_D	NSW_0908_PFAS	Broader Management Zone	Region 1	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW014	13 Jun 2019	0908_QC220_190613	Interlab_D	NSW_0908_PFAS	Broader Management Zone	Region 1	<0.01	<0.02	0.011	0.031	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05			
SW014	05 Nov 2019	0908_MD14_SW_191105	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	<0.01	0.05	<0.02	0.05	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	04 Jun 2020	0908_SW014_200604	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.03	1.32	0.62	1.94	2.32	-	0.06	0.07	0.05	-	<0.02	-	<0.1	0.03	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	26 Nov 2020	0908_SW014_201126	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.06	3.24	0.77	4.01	4.5	-	0.06	0.07	0.06	-	<0.02	-	<0.1	0.05	0.16	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	26 Nov 2020	0908_QC110_201126	Field_D	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.06	2.93	0.79	3.72	4.19	-	0.06	0.07	0.07	-	<0.02	-	<0.1	0.04	0.15	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	26 Nov 2020	0908_QC210_201126	Interlab_D	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.053	2.5	0.74	3.24	-	-	0.054	0.059	0.049	<0.01	<0.01	<0.02	<0.05	0.042	0.14	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
SW014	11 May 2021	0908_SW014_210511	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.01	0.61	0.2	0.81	0.86	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW014	11 May 2021	0908_SW014_211117	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.91	0.34	1.25	1.46	-	0.06	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW014	16 May 2022	0908_SW014_220516	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1	0.22	1.22	1.33	-	<0.02	0.02	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW014	16 May 2022	0908_QC201_220516	Interlab_D	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.96	0.22	1.2	1.3	-	0.03	0.02	0.02	-	<0.02	-	<0.02	<0.02	0.05	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW014	09 Nov 2022	0908_SW014_221107	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.14	0.26	1.4	1.55	-	0.02	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<												

Table T6 - Historical Surface Water Analytical Results

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Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluorohexptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.01	0.13	0.08	0.21	0.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	25 Oct 2021	0908_SW024_211025	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 2	<0.01	0.1	0.12	0.22	0.26	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	17 Nov 2021	0908_SW024_211117	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 2	<0.01	0.1	0.11	0.21	0.24	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW024	17 Nov 2021	0908_QC210_211117	Interlab_D	NSW_0908_PFASOMP	Broader Management Zone	Region 2	<0.01	0.07	0.12	0.19	0.21	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	18 Jan 2022	0908_SW024_220118	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.08	0.05	0.13	0.13	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	18 Jan 2022	0908_QC101_220118	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.09	0.05	0.14	0.15	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	18 Jan 2022	0908_QC201_220118	Interlab_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.11	0.05	0.16	0.16	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW024	07 Mar 2022	0908_SW024_220307	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.19	0.23	0.42	0.5	-	0.02	0.02	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	07 Mar 2022	0908_QC101_220307	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.19	0.25	0.44	0.52	-	0.02	0.02	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	07 Mar 2022	0908_QC201_220307	Interlab_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.18	0.2	0.38	0.46	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	11 Apr 2022	0908_SW024_220411	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.26	0.18	0.44	0.53	-	0.02	0.01	0.01	-	<0.02	-	<0.02	<0.02	0.04	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	11 Apr 2022	0908_QC101_220411	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.02	0.26	0.19	0.44	0.53	-	0.01	0.02	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	11 Apr 2022	0908_QC201_220411	Interlab_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.27	0.19	0.46	0.51	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	16 May 2022	0908_SW024_220516	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 2	0.01	0.24	0.23	0.47	0.55	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	12 Jul 2022	0908_SW024_220712	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.33	0.13	0.46	0.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW024	19 Jul 2022	0908_SW024_220719	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.46	0.15	0.61	0.68	-	0.01	0.01	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	17 Oct 2022	0908_SW024_221017	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.31	0.24	0.55	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW024	08 Nov 2022	0908_SW024_221108	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 2	<0.01	0.27	0.12	0.39	0.42	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	20 Jan 2023	0908_SW024_230120	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.04	0.03	0.06	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW024	20 Jan 2023	0908_QC105_230120	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.03	0.02	0.05	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW024	21 Apr 2023	0908_SW024_230421	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.12	0.1	0.22	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW024	09 May 2023	0908_SW024_230509	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Region 2	<0.01	0.06	0.05	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	07 Jul 2023	0908_SW024_230707	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.03	0.05	0.09	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW024	20 Nov 2023	0908_SW024_231120	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Region 2	<0.01	0.03	0.03	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	16 Apr 2024	0908_SW024_240416	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Region 2	<0.01	0.05	0.04	0.09	0.09	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	27 Sep 2024	0908_SW024_240927	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Region 2	<0.01	0.05	0.05	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	02 Apr 2025	0908_SW024_250402	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Region 2	<0.01	0.05	0.06	0.11	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW024	07 Oct 2025	0908_SW024_251007	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Region 2	<0.01	0.12	0.1	0.22	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW062	17 Jun 2014	DD5_SWATER	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.01	0.11	0.41	0.52	-	-	0.15	-	-	-	<0.01	-	-	0.07	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
SW062	13 Jan 2016	DD5_SW_1312016	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.002	0.088	-	0.088	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW062	14 Dec 2016	DD5_SW_161214	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.05	0.76	0.8	1.56	2.06	-	0.1	0.18	<0.05	-	<0.05	-	<0.1	<0.05	<0.05	0.22	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<									

Table T6 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	(*)																															
ANZG Freshwater Toxicant DGVs LOSP 99% (March 2026)		0.02																															
Surface Water EPC from HHRA (AECOM, 2017) - Marine Water		1.78	1.48																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 1		5.035	1.666																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 2		1.47	1.009																														
Surface Water EPC from HHRA (AECOM, 2017) - Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.05	0.22	0.38	0.6	1.07	-	<0.05	<0.05	<0.05	-	<0.05	-	0.4	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	
SW079	16 Feb 2017	TC2_SW_16022017	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.05	0.26	0.36	0.62	0.96	-	0.1	0.08	<0.05	-	<0.05	-	<0.2	0.06	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	
SW079	24 Feb 2017	TC2_SW_240217	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.05	0.44	0.32	0.76	0.82	-	0.06	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	
SW079	03 Mar 2017	TC2_SW_030317	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.12	0.06	0.18	0.18	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	09 Mar 2017	TC2_SW_090317	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.06	0.04	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	16 Mar 2017	TC2_SW_20170316	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.17	0.49	0.66	0.83	-	0.06	0.06	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	23 Mar 2017	TC2_SW_23032017	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.21	0.52	0.73	0.93	-	0.06	0.07	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	30 Mar 2017	TC2_SW_300317	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.15	0.65	0.8	0.97	-	0.05	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	05 Apr 2017	TC2_SW_050417	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.18	0.53	0.71	-	-	0.04	0.05	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	04 May 2017	TC2_SW_040517	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.24	0.61	0.85	0.93	-	0.03	0.05	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	01 Jun 2017	TC2_SW_010617	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.15	0.5	0.65	0.81	-	0.03	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	20 Jul 2017	TC2_SW_200717	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	0.02	0.29	0.49	0.78	0.96	-	0.05	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	12 Apr 2018	TC2_SW_12042018	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	0.02	0.53	0.38	0.91	1.13	-	0.05	0.05	0.02	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	06 Dec 2018	0908_TC2_SW_181206	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.22	0.25	0.47	0.57	-	0.03	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	13 Jun 2019	0908_TC2_SW_190613	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.05	<0.02	0.05	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	05 Nov 2019	0908_TC2_SW_191105	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.12	0.5	0.62	0.81	-	0.05	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	02 Jun 2020	0908_SW079_200602	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.28	0.24	0.52	0.61	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	26 Nov 2020	0908_SW079_201126	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.21	0.32	0.53	0.67	-	0.04	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	11 May 2021	0908_SW079_210511	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.23	0.17	0.4	0.49	-	0.04	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	12 Nov 2021	0908_SW079_211112	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	0.01	0.4	0.37	0.77	0.93	-	0.04	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	16 May 2022	0908_SW079_220516	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.35	0.19	0.54	0.66	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	09 May 2023	0908_SW079_230509	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.21	0.27	0.48	0.61	-	0.05	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	21 Nov 2023	0908_SW079_231121	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	0.02	0.46	0.33	0.79	1.03	-	0.03	0.03	0.02	-	<0.02	-	<0.1	0.03	0.09	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	21 Nov 2023	0908_QC102_231121	Field_D	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.02	0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	21 Nov 2023	0908_QC202_231121	Interlab_D	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	0.01	0.01	0.03	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.1	<0.5	<0.01	0.02	<0.02	<0.05	<0.1	<0.02	<0.5		
SW079	16 Apr 2024	0908_SW079_240416	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	0.01	0.23	0.51	0.74	0.96	-	0.05	0.06	<0.02	-	<0.02	-	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	25 Sep 2024	0908_SW079_240925	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.15	0.28	0.43	0.57	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	02 Apr 2025	0908_SW079_250402	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.17	0.41	0.58	0.8	0.03	0.06	0.05	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	08 Oct 2025	0908_SW079_251008	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	0.02	0.24	0.28	0.52	0.66	<0.02	0.03	0.04	<0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
SW081	13 Jan 2016	TFD1_SW_1312016	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.002	0.007	-	0.007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-
SW081	14 Dec 2016	TFD1_SW_161214	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.02	<0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW081	12 Apr 2018	TFD1_SW_12042018	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.0																															

[illegible]

Table T6 - Historical Surface Water Analytical Results

[illegible]

Location	Date	Field ID	Sample Type	Project ID	On-base/ Management Zone	Region
SW259	30 Jan 2021	0908_SW259_2101300530	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101300630	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101300730	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101300830	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101300930	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101301030	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101301130	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101301230	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101301330	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101301430	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jan 2021	0908_SW259_2101301530	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	19 Feb 2021	0908_SW259_210219	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	26 Mar 2021	0908_SW259_210326	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	23 Apr 2021	0908_SW259_210423	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	23 Apr 2021	0908_QC100_210423	Field_D	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	23 Apr 2021	0908_QC200_210423	Interlab_D	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	10 May 2021	0908_SW259_210510	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	25 Jun 2021	0908_SW259_210625	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	30 Jul 2021	0908_SW259_210730	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	20 Aug 2021	0908_SW259_210820	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	27 Sep 2021	0908_SW259_210927	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	25 Oct 2021	0908_SW259_211025	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	26 Nov 2021	0908_SW259_211126	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	27 May 2022	0908_SW259_220527	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	15 Nov 2022	0908_SW259_221115	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine
SW259	16 May 2023	0908_SW259_230516	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Marine
SW259	27 Nov 2023	0908_SW259_231127	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Marine
SW259	23 Apr 2024	0908_SW259_240423	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Marine
SW259	20 Sep 2024	0908_SW259_240920	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Marine
SW259	17 Apr 2025	0908_SW259_250417	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Marine
SW259	13 Oct 2025	0908_SW259_251013	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Marine

Notes	
LOR	Limit of Reporting
Normal	Primary sample
Field_D	Intra-laboratory duplicate sample
Interlab_D	Inter-laboratory duplicate sample
(*)	The criteria of 0.00023 for PFOS from PFAS NEMP 2025 Freshwater 99% is superseded by the ANZG 2026 criteria of 0.02 for PFOS.

Table T7 - Historical Sediment Analytical Results

					PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
					Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohehexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDaA)	Perfluorotridecanoic acid (PFTDA)	Perfluorotetradecanoic acid (PFTeDA)	Acids				Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
																										4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
LOR					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
					0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.0002																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
SD047	17 Nov 2014	BD03_SD01_171114	Normal	NSW_0908_PFA	On-base	<0.005	0.015	0.017	0.032	-	-	-	-	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<

Table T7 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides										
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDa)	Perfluorotridecanoic acid (PFTDA)	Perfluorotetradecanoic acid (PFTeDA)	Acids				Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)				
																										4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)											
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
LOR	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005		
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone																																			
SD108	11 May 2021	0908_SD108_210511	Normal	NSW_0908_PFASOMP	On-base	0.0005	0.192	0.007	0.199	0.218	-	0.0003	0.0003	0.0006	-	0.0061	<0.001	<0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.01	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD108	16 Nov 2021	0908_SD108_211116	Normal	NSW_0908_PFASOMP	On-base	0.0005	0.181	0.0075	0.188	0.221	-	0.0044	0.0002	0.0007	-	0.0119	<0.001	<0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	0.001	0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0126	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	19 May 2022	0908_SD108_220519	Normal	NSW_0908_PFASOMP	On-base	<0.0002	0.0377	0.0016	0.0393	0.0435	-	<0.0002	<0.0002	<0.0002	-	0.001	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0029	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	19 May 2022	0908_QC109_220519	Field_D	NSW_0908_PFASOMP	On-base	<0.0002	0.0879	0.0043	0.0922	0.103	-	<0.0002	<0.0002	0.0004	-	0.0028	<0.001	<0.0002	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0066	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	10 Nov 2022	0908_SD108_221110	Normal	NSW_0908_PFASOMP	On-base	0.0002	0.114	0.0079	0.122	0.139	-	<0.0002	0.0004	0.0004	-	0.0066	<0.001	<0.0002	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.001	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0081	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	10 May 2023	0908_SD108_230510	Normal	NSW_0908_PFASOMP_23	On-base	<0.0002	0.0077	0.0003	0.008	0.0089	-	<0.0002	<0.0002	<0.0002	-	0.0006	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	23 Nov 2023	0908_SD108_231123	Normal	NSW_0908_PFASOMP_23	On-base	0.0004	0.19	0.0097	0.2	0.213	-	<0.0002	0.0004	0.001	-	0.0033	<0.001	0.0011	0.0014	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0058	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	18 Apr 2024	0908_SD108_240418	Normal	NSW_0908_PFASOMP_24	On-base	0.0012	0.271	0.0188	0.29	0.328	-	<0.0002	0.0008	0.0019	-	0.0067	<0.001	0.0013	0.001	0.0004	0.0002	<0.0002	<0.0002	0.0008	0.0002	0.0011	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0231	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	25 Sep 2024	0908_SD108_240925	Normal	NSW_0908_PFASOMP_24	On-base	<0.0002	0.0698	0.0016	0.0714	0.0905	-	<0.0002	<0.0002	0.0003	-	0.011	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0076	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD108	02 Apr 2025	0908_SD108_250402	Normal	NSW_0908_PFASOMP_25	On-base	0.0005	0.224	0.0112	0.235	0.266	<0.0005	<0.0002	0.0003	0.001	0.0031	0.0049	<0.001	0.001	0.0016	0.0005	<0.0002	<0.0002	<0.0002	0.0006	0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0164	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD108	09 Oct 2025	0908_SD108_251009	Normal	NSW_0908_PFASOMP_25	On-base	0.0006	0.18	0.0054	0.185	0.209	<0.0005	<0.0002	0.0002	0.0006	0.0031	0.0058	<0.001	0.0023	0.0012	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	0.0008	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD110	16 Dec 2016	LC_B_SED_161216	Normal	NSW_0908_PFAS	On-base	<0.0002	0.0096	0.0002	0.0098	0.0101	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD110	16 Dec 2016	QC602_SED_161216	Field_D	NSW_0908_PFAS	On-base	<0.0002	0.0203	0.0006	0.0209	0.0216	-	<0.0002	<0.0002	<0.0002	-	0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD110	16 Dec 2016	QC702_SED_161216</																																						

Table T7 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic					PFAS - Perfluoroalkyl Sulfonamides								
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluorooheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDaA)	Perfluorotridecanoic acid (PFTDA)	Perfluorotetradecanoic acid (PFTeDA)	Acids				Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		
																											4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)									
LOR						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	0.0002	0.0005	0.0005		
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone																																		
SD001	20 Nov 2020	0908_SD001_201120	Normal	NSW_0908_PFASOMP	Secondary Management Zone	0.0004	0.0393	0.0057	0.045	0.0471	-	0.0003	0.0003	0.0004	-	<0.0002	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD001	20 Nov 2020	0908_QC103_201120	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	0.0004	0.0401	0.0058	0.0459	0.0478	-	0.0002	0.0003	0.0004	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD001	20 Nov 2020	0908_QC203_201120	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	<0.001	0.044	0.014	0.058	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
SD001	11 May 2021	0908_SD001_210511	Normal	NSW_0908_PFASOMP	Secondary Management Zone	0.0004	0.0787	0.0076	0.0863	0.0916	-	0.0003	0.0005	0.0019	-	<0.0002	<0.001	<0.0002	0.0005	<0.0002	0.0004	<0.0002	<0.0002	0.0003	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD001	19 Nov 2021	0908_SD001_211119	Normal	NSW_0908_PFASOMP	Secondary Management Zone	0.0003	0.0207	0.0031	0.0238	0.026	-	<0.0002	<0.0002	0.0003	-	<0.0002	<0.001	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD001	19 Nov 2021	0908_QC115_211119	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	<0.0002	0.0191	0.0023	0.0214	0.0214	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD001	19 Nov 2021	0908_QC215_211119	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	<0.0001	0.011	0.0007	0.012	0.013	-	<0.0001	<0.0001	0.0001	-	0.0004	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	
SD001	18 May 2022	0908_SD001_220518	Normal	NSW_0908_PFASOMP	Secondary Management Zone	<0.0002	0.0014	0.0002	0.0016	0.0016	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
SD001	08 Nov 2022	0908_SD001_221108	Normal	NSW_0908_PFASOMP	Secondary Management Zone	<0.0002	0.0936	0.0082	0.102	0.107	-	0.0006	0.0006	<0.0002	-	<0.0002	<0.001	<0.0002	0.0012	0.0006	<0.0002	<0.0002	<0.0002	0.0012	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0013	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD001	08 May 2023	0908_SD001_230508	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	0.001	0.142	0.0073	0.149	0.154	-	<0.0002	<0.0002	0.0017	-	<0.0002	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD001	21 Nov 2023	0908_SD001_231121	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	0.0007	0.143	0.0093	0.152	0.157	-	0.0006	0.0006	0.0003	-	0.0005	<0.001	0.0007	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD001	24 Apr 2024	0908_SD001_240424	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	0.0006	0.176	0.0239	0.2	0.215	-	0.0012	0.002	0.0025	-	<0.0002	<0.001	0.0016	0.0021	0.0017	<0.0002	<0.0002	<0.0002	0.0009	<0.0002	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	0.0015	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD001	25 Sep 2024	0908_SD001_240925	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	0.0004	0.133	0.0149	0.148	0.155	-	0.0004	0.0005	0.0028	-	<0.0002	<0.001	0.0002	0.0005	<0.0002	<0.0002	<0.0002	0.0005	<0.0002	0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0005	<0.0005	0.0012	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD001	02 Apr 2025	0908_SD001_250402	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	0.0008	0.13	0.0237	0.154	0.171	0.001	0.0032	0.0014	0.0021	0.0012	0.0004	<0.001	0.0004	0.0031	0.0011	<0.0002	<0.0002	0.0002	0.0008	0.0004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD001	07 Oct 2025	0908_SD001_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002																																	

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Table T7 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids					PFAS - Perfluoroalkyl Sulfonamides								
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Acids				Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)			
																										4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)										
LOR						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	
SD059	16 May 2023	0908_SD059_230516	Normal	NSW_0908_PFA5OMP_23	Secondary Management Zone	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD059	16 May 2023	0908_QC116_230516	Field_D	NSW_0908_PFA5OMP_23	Secondary Management Zone	<0.0002	0.0005	0.0004	0.0009	0.0009	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD059	16 May 2023	0908_QC216_230516	Interlab_D	NSW_0908_PFA5OMP_23	Secondary Management Zone	<0.0001	0.0003	0.0003	0.0006	0.0006	-	<0.0001	<0.0001	<0.0001	-	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0005	
SD059	23 Nov 2023	0908_SD059_231123	Normal	NSW_0908_PFA5OMP_23	Secondary Management Zone	<0.0002	0.0015	<0.0002	0.0015	0.0015	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD059	16 Apr 2024	0908_SD059_240416	Normal	NSW_0908_PFA5OMP_24	Secondary Management Zone	<0.0002	0.013	0.0026	0.0156	0.0164	-	<0.0002	<0.0002	<0.0002	-	0.0008	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD059	23 Sep 2024	0908_SD059_240923	Normal	NSW_0908_PFA5OMP_24	Secondary Management Zone	<0.0002	0.0011	<0.0002	0.0011	0.0011	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD059	23 Sep 2024	0908_QC102_240923	Field_D	NSW_0908_PFA5OMP_24	Secondary Management Zone	<0.0002	0.0003	<0.0002	0.0003	0.0003	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD059	23 Sep 2024	0908_QC202_240923	Interlab_D	NSW_0908_PFA5OMP_24	Secondary Management Zone	<0.0001	0.001	0.0002	0.0013	0.0013	-	<0.0001	<0.0001	<0.0001	-	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
SD059	02 Apr 2025	0908_SD059_250402	Normal	NSW_0908_PFA5OMP_25	Secondary Management Zone	<0.0002	0.0003	<0.0002	0.0003	0.0003	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD059	07 Oct 2025	0908_SD059_251007	Normal	NSW_0908_PFA5OMP_25	Secondary Management Zone	<0.0002	0.0009	<0.0002	0.0009	0.0012	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD600	25 Nov 2022	0908_SD600_221125	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	<0.0002	0.0164	0.0014	0.0178	0.0181	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD600	15 May 2023	0908_SD600_230515	Normal	NSW_0908_PFA5OMP_23	Secondary Management Zone	<0.0002	0.0239	0.0007	0.0246	0.0255	-	<0.0002	<0.0002	<0.0002	-	0.0009	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD600	27 Nov 2023	0908_SD600_231127	Normal	NSW_0908_PFA5OMP_23	Secondary Management Zone	<0.0002	0.051	0.0016	0.0526	0.0534	-	<0.0002	<0.0002	0.0004	-	0.0004	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	&						

Table T7 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n-2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides										
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSSE)			
						mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0005	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005	
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.0002	0.0017	0.0003	0.002	0.002	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	05 Nov 2019	0908_TC7_SD_191105	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.0017	0.0003	0.002	0.002	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	04 Jun 2020	0908_SD024_200604	Normal	NSW_0908_PFA5OMP	Broader Management Zone	0.0005	0.0097	0.0014	0.0111	0.0119	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	20 Nov 2020	0908_SD024_201120	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.017	0.0011	0.0181	0.0184	-	<0.0002	<0.0002	0.0003	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	11 May 2021	0908_SD024_210511	Normal	NSW_0908_PFA5OMP	Broader Management Zone	0.0005	0.0445	0.004	0.0485	0.0501	-	<0.0002	<0.0002	0.0008	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	17 Nov 2021	0908_SD024_211117	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.0034	0.0005	0.0039	0.0039	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	17 Nov 2021	0908_QC213_211117	Interlab_D	NSW_0908_PFA5OMP	Broader Management Zone	<0.0001	0.0028	0.0004	0.0032	0.0032	-	<0.0001	<0.0001	<0.0001	-	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.0002	<0.001	<0.0002	<0.005	
SD024	16 May 2022	0908_SD024_220516	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.0031	0.0012	0.0043	0.0043	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD024	08 Nov 2022	0908_SD024_221108	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.084	0.0059	0.0899	0.0902	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD024	09 May 2023	0908_SD024_230509	Normal	NSW_0908_PFA5OMP_23	Broader Management Zone	<0.0002	0.0731	0.0025	0.0756	0.0764	-	<0.0002	<0.0002	0.0008	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD024	20 Nov 2023	0908_SD024_231120	Normal	NSW_0908_PFA5OMP_23	Broader Management Zone	0.0017	0.0248	0.0008	0.0256	0.0286	-	<0.0002	<0.0002	0.0002	-	<0.0002	<0.001	<0.0002	0.0007	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD024	16 Apr 2024	0908_SD024_240416	Normal	NSW_0908_PFA5OMP_24	Broader Management Zone	0.0052	0.0627	0.003	0.0657	0.0798	-	<0.0002	<0.0002	0.0006	-	<0.0002	<0.001	0.0018	0.004	0.0016	0.0006	0.0003	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD024	27 Sep 2024	0908_SD024_240927	Normal	NSW_0908_PFA5OMP_24	Broader Management Zone	0.0003	0.0103	0.0005	0.0108	0.0111	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD024	02 Apr 2025	0908_SD024_250402	Normal	NSW_0908_PFA5OMP_25	Broader Management Zone	<0.0002	0.0066	<0.0002	0.0066	0.0066	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD024	07 Oct 2025	0908_SD024_251007	Normal	NSW_0908_PFA5OMP_25	Broader Management Zone	0.0003	0.0252	0.0008	0.026	0.0265	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD062	17 Jun 2014	DD5 SEDIMENT	Normal	NSW_0908_PFA5	Broader Management Zone	<0.005	0.056	<0.005	0.056	-	-	<0.005	-	-	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	-	-	<0.005	-	-	-		
SD062	13 Jan 2016	DD5 SD_13012016	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0005	0.0009	-	0.0009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	
SD062	14 Dec 2016	DD5 SED_161214	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0001	0.0002	0.0012	0.0012	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD062	12 Apr 2018	DD5 SED_12042018	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0079	0.0005	0.0084	0.0084	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD062	07 Dec 2018	0908_DD5_SD_181207	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0086	0.0004	0.009	0.0094	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD062	07 Dec 2018	0908_QC110_SD_181207	Field_D	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0066	0.0004	0.007	0.007	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD062	07 Dec 2018	0908_QC205_SD_181207	Interlab_D	NSW_0908_PFA5	Broader Management Zone	<0.001	0.0084	<0.001	0.0094	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001	<0.002	<0.002	<0.001
SD062	13 Jun 2019	0908_DD5_SD_190613	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0303	0.0018	0.0321	0.0321	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD062	06 Nov 2019	0908_DD5_SD_191106	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.0054	0.0006	0.006	0.006	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0																						

Table T7 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids					PFAS - Perfluoroalkyl Sulfonamides								
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Acids				Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)			
																										4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)										
LOR						mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0005	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005			
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.0002	0.0118	0.0017	0.0135	0.0135	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD081	02 Apr 2025	0908_SD081_250402	Normal	NSW_0908_PFA5OMP_25	Broader Management Zone	<0.0002	0.0118	0.0017	0.0135	0.0135	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD081	02 Apr 2025	0908_QC101_250402	Field_D	NSW_0908_PFA5OMP_25	Broader Management Zone	<0.0002	0.0092	0.001	0.0102	0.0102	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD081	02 Apr 2025	0908_QC201_250402	Interlab_D	NSW_0908_PFA5OMP_25	Broader Management Zone	<0.0001	0.012	0.0009	0.013	0.013	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0005
SD081	07 Oct 2025	0908_SD081_251007	Normal	NSW_0908_PFA5OMP_25	Broader Management Zone	<0.0002	0.0048	0.0003	0.0051	0.0051	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	21 Feb 2017	FCD4_SED_17022017	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0168	0.0005	0.0173	0.0175	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0001	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	12 Apr 2018	FCD4_SED_13042018	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0045	0.0007	0.0052	0.0052	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	07 Dec 2018	0908_FCD4_SD_181207	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0014	0.0005	0.0019	0.0019	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	14 Jun 2019	0908_FCD4_SD_190614	Normal	NSW_0908_PFA5	Broader Management Zone	<0.0002	0.0012	<0.0002	0.0012	0.0012	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	14 Jun 2019	0908_FCD4_SD_190614	Normal	NSW_0908_PFA5	Broader Management Zone	-	-	-	0.0014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD259	08 Nov 2019	0908_FCD4_SD_191108	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.001	0.0013	0.0023	0.0025	-	<0.0002	0.0002	<0.0002	-	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	25 May 2020	0908_SD259_200525	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.0078	0.0014	0.0092	0.0097	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0001	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	13 Nov 2020	0908_SD259_201113	Normal	NSW_0908_PFA5OMP	Broader Management Zone	0.0004	0.0111	0.0029	0.014	0.0149	-	<0.0002	<0.0002	0.0003	-	<0.0002	<0.0001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	10 May 2021	0908_SD259_210510	Normal	NSW_0908_PFA5OMP	Broader Management Zone	0.0004	0.0292	0.0045	0.0337	0.0361	-	0.0003	0.0002	0.0004	-	0.0006	<0.0001	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005
SD259	26 Nov 2021	0908_SD259_211126	Normal	NSW_0908_PFA5OMP	Broader Management Zone	<0.0002	0.0006	0.0004	0.001	0.001	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005</						

Table T8 - Groundwater Trends - Mann-Kendall

Location	On-base/Management Zone	Area	Note	Aquifer	Perfluorooctanoic acid (PFOA)	CF	Perfluorooctane sulfonic acid (PFOS)	CF	Perfluorohexane sulfonic acid (PFHxS)	CF	Sum of PFHxS and PFOS	CF	Perfluorobutane sulfonic acid (PFBS)	CF
					µg/L		µg/L		µg/L		µg/L		µg/L	
MW196	On-base	Former & Current Fire Station (Facility 165)		Shallow	TDn, S=-124, N=28, P=0.0074	99.3%	NT, LH, S=-66, N=28, P=0.0995	90.1%	TDn, S=-182, N=28, P=0.0002	100.0%	TDn, S=-83, N=27, P=0.0437	95.6%	TDn, S=-165, N=25, P=0.0000	100.0%
MW198	On-base	Former & Current Fire Station (Facility 165)		Shallow	NT, S=-5, N=21, P=0.4518	54.8%	NT, S=3, N=21, P=0.4759	52.4%	NT, S=3, N=20, P=0.4741	52.6%	NT, S=-9, N=19, P=0.3898	61.0%	NT, S=-37, N=20, P=0.1205	88.0%
MW200	On-base	Former & Current Fire Station (Facility 165)		Shallow	NC	n/a	NT, S=7, N=13, P=0.3562	64.4%	NT, S=-11, N=12, P=0.2435	75.7%	NT, S=6, N=12, P=0.3659	63.4%	NC	n/a
MW201D	On-base	Former & Current Fire Station (Facility 165)		Deep	NC	n/a	NT, S=6, N=12, P=0.3625	63.8%	NT, S=-18, N=11, P=0.0904	91.0%	NT, S=-7, N=11, P=0.3192	68.1%	NT, S=-6, N=11, P=0.3333	66.7%
MW201S	On-base	Former & Current Fire Station (Facility 165)		Shallow	NT, S=-3, N=14, P=0.4561	54.4%	NT, S=-23, N=14, P=0.1142	88.6%	NT, S=-13, N=13, P=0.2316	76.8%	NT, S=-22, N=13, P=0.1001	90.0%	NT, S=-27, N=13, P=0.0531	94.7%
MW202D	On-base	Former & Current Fire Station (Facility 165)		Deep	NT, S=26, N=24, P=0.1677	83.2%	TUp, S=-114, N=24, P=0.0024	99.8%	NT, S=17, N=23, P=0.3355	66.5%	TUp, S=-83, N=23, P=0.0143	98.6%	NT, S=-25, N=23, P=0.2167	78.3%
MW202S	On-base	Former & Current Fire Station (Facility 165)		Shallow	NT, S=-37, N=20, P=0.1105	89.0%	NT, S=-27, N=20, P=0.1993	80.1%	NT, S=-42, N=19, P=0.0754	92.5%	NT, S=-7, N=19, P=0.4169	58.3%	TDn, S=-64, N=19, P=0.0020	99.8%
MW171D	On-base	Former DEMS Landfill (Facility 394)		Deep	NT, S=-21, N=16, P=0.1777	82.2%	TDn, S=-59, N=16, P=0.0045	99.6%	NT, S=30, N=15, P=0.0754	92.5%	TDn, S=-34, N=14, P=0.0352	96.5%	NT, S=27, N=15, P=0.0978	90.2%
MW171S	On-base	Former DEMS Landfill (Facility 394)		Shallow	TDn, S=-263, N=43, P=0.0030	99.7%	TDn, S=-303, N=43, P=0.0008	99.9%	TDn, S=-271, N=42, P=0.0017	99.8%	TDn, S=-196, N=38, P=0.0071	99.3%	TDn, S=-349, N=42, P=0.0001	100.0%
MW172	On-base	Former DEMS Landfill (Facility 394)		Shallow	TUp, S=455, N=45, P=0.0000	100.0%	TUp, S=256, N=45, P=0.0046	99.5%	TUp, S=610, N=44, P=0.0000	100.0%	TUp, S=555, N=42, P=0.0000	100.0%	TUp, S=518, N=44, P=0.0000	100.0%
MW240D	On-base	Former DEMS Landfill (Facility 394)		Deep	NT, S=-42, N=20, P=0.0806	91.9%	NT, S=-29, N=20, P=0.1641	83.6%	TDn, S=-67, N=20, P=0.0160	98.4%	TDn, S=-68, N=20, P=0.0148	98.5%	TDn, S=-76, N=20, P=0.0059	99.4%
MW281S	On-base	Former DEMS Landfill (Facility 394)		Shallow	TDn, S=-166, N=21, P=0.0000	100.0%	TDn, S=-101, N=21, P=0.0013	99.9%	TDn, S=-143, N=21, P=0.0000	100.0%	TDn, S=-116, N=21, P=0.0003	100.0%	TDn, S=-115, N=21, P=0.0003	100.0%
MW282S	On-base	Former DEMS Landfill (Facility 394)		Shallow	NT, S=-38, N=18, P=0.0800	92.0%	NT, S=-41, N=18, P=0.0646	93.5%	TDn, S=-53, N=18, P=0.0244	97.6%	TDn, S=-44, N=17, P=0.0383	96.2%	TDn, S=-93, N=18, P=0.0002	100.0%
MW329	On-base	Former DEMS Landfill (Facility 394)		Shallow	TDn, S=-11, N=6, P=0.0301	97.0%	TDn, S=-15, N=6, P=0.0043	99.6%	TDn, S=-11, N=6, P=0.0301	97.0%	TDn, S=-13, N=6, P=0.0121	98.8%	TDn, S=-14, N=6, P=0.0064	99.4%
MW340D	On-base	Former DEMS Landfill (Facility 394)		Deep	NT, S=-2, N=6, P=0.4202	58.0%	NT, S=-11, N=6, P=0.0301	97.0%	NT, S=5, N=6, P=0.2262	77.4%	NT, S=-3, N=6, P=0.3536	64.6%	NT, S=3, N=6, P=0.3484	65.2%
MW340S	On-base	Former DEMS Landfill (Facility 394)		Shallow	TDn, S=-13, N=8, P=0.0496	95.0%	NT, S=-2, N=8, P=0.4489	55.1%	TDn, S=-22, N=8, P=0.0047	99.5%	TDn, S=-22, N=8, P=0.0047	99.5%	TDn, S=-15, N=8, P=0.0373	96.3%
MW342D	On-base	Former DEMS Landfill (Facility 394)		Deep	NC	n/a	TDn, S=-16, N=8, P=0.0297	97.0%	TUp, S=20, N=8, P=0.0094	99.1%	NT, S=4, N=8, P=0.3501	65.0%	TUp, S=21, N=8, P=0.0048	99.5%
MW344D	On-base	Former DEMS Landfill (Facility 394)		Deep	TUp, S=10, N=6, P=0.0426	95.7%	TDn, S=-11, N=6, P=0.0301	97.0%	NT, S=7, N=6, P=0.1298	87.0%	NT, S=7, N=6, P=0.1298	87.0%	NT, S=5, N=6, P=0.2178	78.2%
MW344S	On-base	Former DEMS Landfill (Facility 394)		Shallow	TDn, S=-18, N=8, P=0.0145	98.6%	NT, S=-8, N=8, P=0.1932	80.7%	TDn, S=-20, N=8, P=0.0094	99.1%	TDn, S=-16, N=8, P=0.0317	96.8%	NC	n/a
MW354S	On-base	Former DEMS Landfill (Facility 394)		Shallow	NT, S=-11, N=7, P=0.0666	93.3%	NT, S=-9, N=7, P=0.1148	88.5%	TDn, S=-15, N=7, P=0.0177	98.2%	NT, S=-9, N=7, P=0.1148	88.5%	TDn, S=-17, N=7, P=0.0081	99.2%
MW166	On-base	Former Fire Training Area (Facility 479)		Shallow	TDn, S=-288, N=38, P=0.0001	100.0%	TDn, S=-459, N=38, P=0.0000	100.0%	NT, S=-88, N=37, P=0.1272	87.3%	TDn, S=-451, N=37, P=0.0000	100.0%	TDn, S=-273, N=37, P=0.0000	100.0%
MW167	On-base	Former Fire Training Area (Facility 479)		Shallow	TDn, S=-995, N=55, P=0.0000	100.0%	TDn, S=-871, N=55, P=0.0000	100.0%	TDn, S=-1069, N=55, P=0.0000	100.0%	TDn, S=-816, N=52, P=0.0000	100.0%	TDn, S=-944, N=55, P=0.0000	100.0%
MW168	On-base	Former Fire Training Area (Facility 479)		Shallow	NT, S=138, N=48, P=0.1112	88.9%	TDn, S=-439, N=48, P=0.0000	100.0%	NT, S=-82, N=47, P=0.2288	77.1%	TDn, S=-358, N=45, P=0.0002	100.0%	NT, S=-82, N=47, P=0.2271	77.3%
MW169D	On-base	Former Fire Training Area (Facility 479)		Deep	TDn, S=-140, N=29, P=0.0010	99.9%	TDn, LH, S=-192, N=29, P=0.0002	100.0%	TDn, S=-229, N=28, P=0.0000	100.0%	TDn, S=-182, N=27, P=0.0001	100.0%	TDn, S=-260, N=28, P=0.0000	100.0%
MW169S	On-base	Former Fire Training Area (Facility 479)		Shallow	TDn, S=-135, N=23, P=0.0001	100.0%	TDn, LH, S=-78, N=23, P=0.0206	97.9%	TDn, S=-158, N=22, P=0.0000	100.0%	TDn, LH, S=-99, N=22, P=0.0028	99.7%	TDn, S=-89, N=22, P=0.0006	99.9%
MW134D	On-base	HWC Pump Station 7 (PS7)		Deep	NC	n/a	TDn, S=-88, N=23, P=0.0080	99.2%	NT, S=-47, N=22, P=0.0920	90.8%	TDn, S=-58, N=21, P=0.0415	95.9%	NC	n/a
MW134I	On-base	HWC Pump Station 7 (PS7)		Intermediate	NC	n/a	TDn, S=-71, N=21, P=0.0143	98.6%	NT, S=2, N=20, P=0.4857	51.4%	TDn, S=-52, N=20, P=0.0467	95.3%	NC	n/a
MW245D	On-base	HWC Pump Station 7 (PS7)		Deep	NC	n/a	NC	n/a	NC	n/a	NC	n/a	NC	n/a
MW245S	On-base	HWC Pump Station 7 (PS7)		Shallow	NC	n/a	NC	n/a	NC	n/a	NT, S=0, N=5, P=0.5000	50.0%	NC	n/a
MW317D	On-base	HWC Pump Station 7 (PS7)		Deep	NC	n/a	NC	n/a	NC	n/a	NC	n/a	NC	n/a
MW317S	On-base	HWC Pump Station 7 (PS7)		Shallow	NC	n/a	NT, S=-2, N=8, P=0.4489	55.1%	NT, S=3, N=8, P=0.3943	60.6%	NT, S=-7, N=8, P=0.2272	77.3%	NC	n/a
MW108D	On-base	Lake Cochran		Deep	TUp, S=97, N=25, P=0.0006	99.9%	NT, S=-5, N=25, P=0.4464	55.4%	TUp, S=91, N=24, P=0.0127	98.7%	TUp, S=106, N=23, P=0.0028	99.7%	TUp, S=117, N=24, P=0.0017	99.8%
MW108S	On-base	Lake Cochran		Shallow	NT, S=25, N=45, P=0.4058	59.4%	TUp, S=327, N=45, P=0.0007	99.9%	TDn, S=-197, N=44, P=0.0237	97.6%	NT, S=72, N=41, P=0.2126	78.7%	TDn, S=-288, N=44, P=0.0011	99.9%
MW109D	On-base	Lake Cochran		Deep	NT, S=-53, N=26, P=0.1256	87.4%	TDn, S=-109, N=26, P=0.0086	99.1%	NT, S=-24, N=25, P=0.2956	70.4%	NT, S=-61, N=23, P=0.0565	94.4%	NT, S=-48, N=25, P=0.1356	86.4%
MW175D	On-base	Lake Cochran		Deep	TUp, S=157, N=27, P=0.0005	100.0%	TUp, S=81, N=27, P=0.00476	95.2%	TUp, S=163, N=26, P=0.0002	100.0%	NT, S=63, N=25, P=0.0738	92.6%	TUp, S=123, N=26, P=0.0029	99.7%
MW179D	On-base	Lake Cochran		Deep	TUp, S=169, N=24, P=0.0000	100.0%	TUp, S=108, N=23, P=0.0027	99.7%	TUp, S=108, N=23, P=0.0023	99.8%	TUp, S=121, N=23, P=0.0008	99.9%	NT, S=60, N=23, P=0.0571	94.3%
MW179S	On-base	Lake Cochran		Shallow	TUp, S=129, N=22, P=0.0001	100.0%	TUp, S=75, N=22, P=0.0183	98.2%	TUp, S=81, N=21, P=0.0078	99.2%	TUp, S=107, N=21, P=0.0007	99.9%	NT, S=21, N=21, P=0.2720	72.8%
MW466	On-base	Lake Cochran		Shallow	TDn, S=-271, N=55, P=0.0249	97.5%	TDn, S=-288, N=55, P=0.0186	98.1%	TDn, S=-269, N=54, P=0.0228	97.7%	TDn, S=-218, N=52, P=0.0434	95.7%	TDn, S=-411, N=50, P=0.0003	100.0%
MW468	On-base	Lake Cochran		Shallow	NT, S=-156, N=43, P=0.0522	94.8%	TDn, S=-165, N=43, P=0.0430	95.7%	TDn, S=-158, N=42, P=0.0444	95.6%	NT, S=-120, N=41, P=0.0906	90.9%	TDn, S=-251, N=42, P=0.0033	99.7%
MW406	On-base	North-East Landfill		Shallow	NC	n/a	NC	n/a	NT, S=-16, N=16, P=0.2423	75.8%	NT, S=-13, N=17, P=0.3052	69.5%	NC	n/a
MW155	On-base	Northern Boundary	(**)	Shallow	NT, S=32, N=17, P=0.0896	91.0%	NT, S=-37, N=17, P=0.0689	93.1%	NT, S=-16, N=16, P=0.2493	75.1%	NT, S=-4, N=15, P=0.4409	55.9%	NC	n/a
MW106D	On-base	Trade Waste Treatment (Facility 480)		Deep	TDn, S=-87, N=23, P=0.0112	98.9%	NT, S=1, N=23, P=0.5000	50.0%	TDn, S=-94, N=23, P=0.0070	99.3%	NT, S=-56, N=22, P=0.0604	94.0%	NT, S=-41, N=23, P=0.1386	86.1%
MW106S	On-base	Trade Waste Treatment (Facility 480)		Shallow	NT, S=15, N=23, P=0.3142	68.6%	NT, S=26, N=23, P=0.2450	75.5%	TDn, S=-90, N=23, P=0.0093	99.1%	NT, S=-38, N=22, P=0.1466	85.3%	NC	n/a
MW208	On-base	Trade Waste Treatment (Facility 480)		Shallow	NT, S=13, N=19, P=0.3369	66.3%	NT, S=10, N=19, P=0.3764	62.4%	NT, S=-16, N=18, P=0.2848	71.5%	NT, S=20, N=18, P=0.2357	76.4%	NT, S=-4, N=18, P=0.4546	54.5%
MW210D	On-base	Trade Waste Treatment (Facility 480)		Deep	NC	n/a	NT, S=-9, N=14, P=0.3001	70.0%	TDn, S=-74, N=14, P=0.0000	100.0%	TDn, S=-60, N=13, P=0.0001	100.0%	TDn, S=-67, N=14, P=0.0001	100.0%
MW210S	On-base	Trade Waste Treatment (Facility 480)		Shallow	NT, S=-25, N=15, P=0.1120	88.8%	TDn, S=-40, N=15, P=0.0267	97.3%	NT, S=-34, N=15, P=0.0510	94.9%	TDn, S=-28, N=13, P=0.0498	95.0%	TDn, S=-45, N=15, P=0.0143	98.6%
MW304	On-base	Trade Waste Treatment (Facility 480)		Shallow	NT, S=2, N=5, P=0.4032	59.7%	NT, S=6, N=5, P=0.1103	89.0%	NT, S=-2, N=5, P=0.4032	59.7%	NT, S=6, N=5, P=0.1103	89.0%	NT, S=-2, N=5, P=0.4032	59.7%
MW441	On-base	Trade Waste Treatment (Facility 480)		Shallow	NT, S=1, N=11, P=0.5000	50.0%	NT, S=-12, N=11, P=0.1952	80.5%	TUp, S=27, N=11, P=0.0215	97.9%	NT, S=-7, N=10, P=0.2958	70.4%	NT, S=12, N=11, P=0.1952	80.5%
MW886	On-base	Trade Waste Treatment (Facility 480)		Shallow	NT, S=-4, N=4, P=0.1541	84.6%	NT, S=0, N=4, P=0.5000	50.0%	NT, S=-2, N=4, P=0.3670	63.3%	NT, S=0, N=4, P=0.5000	50.0%	NT, S=-1, N=4, P=0.5000	50.0%
MW126D	Primary Management Zone	Cabbage Tree Road		Deep	NC	n/a	NT, S=19, N=20, P=0.2451	75.5%	NT, S=4, N=20, P=0.4442	55.6%	NT, S=2, N=19, P=0.4844	51.6%	NC	n/a
MW126S	Primary Management Zone	Cabbage Tree Road		Shallow	TUp, S=102, N=27, P=0.0175	98.3%	TUp, LH, S=177, N=27, P=0.0001	100.0%	TUp, S=79, N=26, P=0.0428	95.7%	TUp, S=128, N=26, P=0.0026	99.7%	NT, S=37, N=26, P=0.2136	78.6%
MW178	Primary Management Zone	Cabbage Tree Road		Shallow	NC	n/a	TUp, S=92, N=20, P=0.0011	99.9%	TUp, S=101, N=20, P=0.0004	100.0%	TUp, S=101, N=20, P=0.0004	100.0%	TUp, S=85, N=20, P=0.0016	99.8%
MW238D	Primary Management Zone	Cabbage Tree Road	(*)	Deep	NC	n/a	NC	n/a	NC	n/a	NC	n/a	NC	n/a
MW238S	Primary Management Zone	Cabbage Tree Road	(*)	Shallow	NC	n/a	NC	n/a	NC	n/a	NC	n/a	NC	n/a
MW104D	Primary Management Zone	Southern Area	(*)	Deep	TDn, S=-22, N=8, P=0.0047	99.5%	TDn, S=-18, N=8, P=0.0177	98.2%	TDn, S=-22, N=8, P=0.0047	99.5%	TDn, S=-18, N=8, P=0.0177	98.2%	TDn, S=-24, N=8, P=0.0022	99.8%
MW104S	Primary Management Zone	Southern Area	(*)	Shallow	NT, S=-4, N=8, P=0.3553	64.5%	NT, S=-6, N=8, P=0.2681	73.2%	NT, LH, S=-2, N=8, P=0.4508	54.9%	NT, S=-2, N=8, P=0.4508	54.9%	NT, S=-5, N=8, P=0.3090	69.1%
MW177	Primary Management Zone	Southern Area		Shallow	NC	n/a	NC	n/a	NC	n/a	NC	n/a	NC	n/a
MW184D	Primary Management Zone	Southern Area	(*)	Deep	NT, S=-9, N=8, P=0.1593	84.1%	NT, S=-14, N=8, P=0.0539	94.6%	NT, S=-14, N=8, P=0.0539	94.6%	TDn, S=-15, N=7			

Table T8 - Groundwater Trends - Mann-Kendall

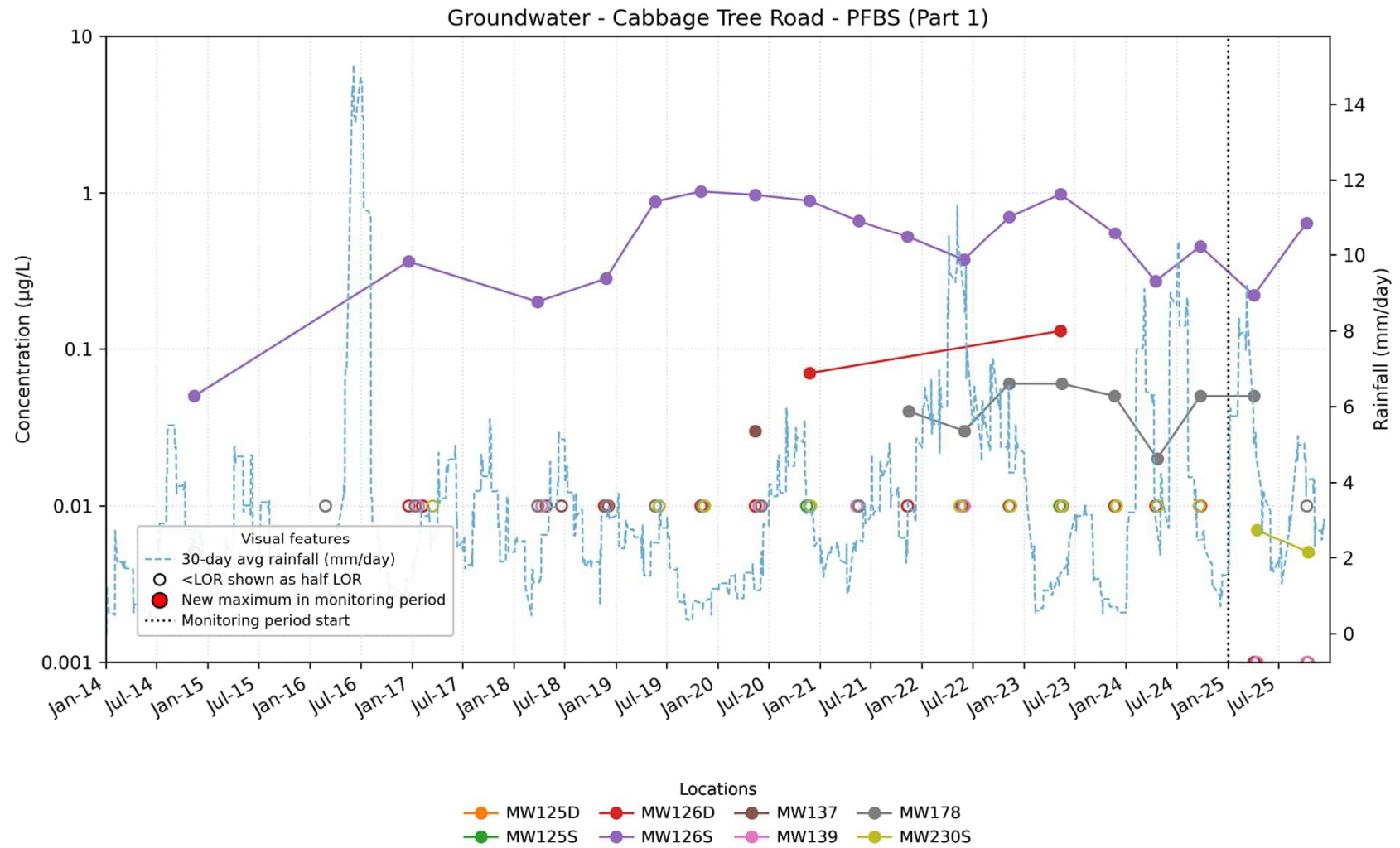
				Perfluorooctanoic acid (PFOA)	CF	Perfluorooctane sulfonic acid (PFOS)	CF	Perfluorohexane sulfonic acid (PFHxS)	CF	Sum of PFHxS and PFOS	CF	Perfluorobutane sulfonic acid (PFBS)	CF		
Location	On-base/Management Zone	Area	Note	Aquifer	µg/L			µg/L		µg/L		µg/L			
MW162S	Secondary Management Zone	East of base - Nelson Bay Road		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW144	Secondary Management Zone	Fullerton Cove		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW147D	Secondary Management Zone	Fullerton Cove		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW147S	Secondary Management Zone	Fullerton Cove		Shallow	NC	n/a	NT, S=12, N=10, P=0.1500	85.0%	NT, S=11, N=10, P=0.1769	82.3%	NT, S=13, N=10, P=0.1329	86.7%	NT, S=17, N=10, P=0.0545	94.6%	
MW536	Secondary Management Zone	Fullerton Cove		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW537	Secondary Management Zone	Fullerton Cove		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW195	Secondary Management Zone	Lavis Lane		Shallow	NT, S=2, N=11, P=0.4662	53.4%	NT, S=19, N=11, P=0.0776	92.2%	NT, S=1, N=10, P=0.5000	50.0%	NT, S=6, N=11, P=0.3481	65.2%	NT, S=-13, N=10, P=0.1067	89.3%	
MW279S	Secondary Management Zone	Lavis Lane		Shallow	NT, S=-31, N=18, P=0.1219	87.8%	NT, S=28, N=18, P=0.1527	84.7%	NT, S=-10, N=17, P=0.3554	64.5%	NT, S=-22, N=18, P=0.2130	78.7%	NT, S=26, N=17, P=0.1478	85.2%	
MW123	Secondary Management Zone	Salt Ash		Shallow	TDn, S=-48, N=17, P=0.0234	97.7%	TDn, S=-59, N=17, P=0.0084	99.2%	TDn, S=-46, N=15, P=0.0129	98.7%	TDn, S=-45, N=17, P=0.0348	96.5%	TDn, S=-65, N=15, P=0.0006	99.9%	
MW255D	Secondary Management Zone	Salt Ash		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW255S	Secondary Management Zone	Salt Ash		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW256D	Secondary Management Zone	Salt Ash		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW256S	Secondary Management Zone	Salt Ash		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW257D	Secondary Management Zone	Salt Ash		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW257S	Secondary Management Zone	Salt Ash		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW260D	Secondary Management Zone	Salt Ash		Deep	NC	n/a		NC	n/a	NT, S=17, N=15, P=0.1977	80.2%	NT, S=17, N=15, P=0.1977	80.2%	NC	n/a
MW260S	Secondary Management Zone	Salt Ash		Shallow	NC	n/a	NT, S=27, N=16, P=0.1155	88.5%	TDn, S=-60, N=16, P=0.0032	99.7%	NT, S=-23, N=16, P=0.1577	84.2%	NC	n/a	
MW150D	Secondary Management Zone	South of base - Nelson Bay Road		Deep	NC	n/a		NC	n/a	NT, S=0, N=4, P=0.5000	50.0%	NT, S=0, N=4, P=0.5000	50.0%	NC	n/a
MW150S	Secondary Management Zone	South of base - Nelson Bay Road		Shallow	NC	n/a	NT, S=-6, N=5, P=0.1103	89.0%	NC	n/a	NT, S=-5, N=5, P=0.1561	84.4%	NC	n/a	
MW146AD	Secondary Management Zone	Southern Area - Cabbage Tree Road		Deep	NC	n/a	TUp, S=54, N=19, P=0.0218	97.8%	NC	n/a	TUp, S=52, N=19, P=0.0261	97.4%	NC	n/a	
MW146S	Secondary Management Zone	Southern Area - Cabbage Tree Road		Shallow	NC	n/a	TUp, S=40, N=16, P=0.0100	99.0%	NC	n/a	TUp, S=42, N=16, P=0.0072	99.3%	NC	n/a	
MW107D	Secondary Management Zone	West of base		Deep	NC	n/a	NT, S=16, N=33, P=0.3400	66.0%	NC	n/a	NT, LH, S=47, N=32, P=0.1176	88.2%	NC	n/a	
MW107S	Secondary Management Zone	West of base		Shallow	NC	n/a	NT, S=59, N=33, P=0.1032	89.7%	NC	n/a	TUp, S=78, N=32, P=0.0495	95.1%	NC	n/a	
MW315D	Secondary Management Zone	West of base		Deep	NC	n/a	TDn, S=-64, N=25, P=0.0426	95.7%	TUp, S=220, N=25, P=0.0000	100.0%	TUp, S=225, N=25, P=0.0000	100.0%	TUp, S=91, N=25, P=0.0175	98.3%	
MW315S	Secondary Management Zone	West of base		Shallow	TUp, S=80, N=26, P=0.0195	98.1%	NT, S=6, N=26, P=0.4509	54.9%	NT, S=-43, N=26, P=0.1763	82.4%	NT, S=-56, N=24, P=0.0850	91.5%	NT, S=-70, N=26, P=0.0560	94.4%	
MW139	Broader Management Zone	Cabbage Tree Road		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
POT085	Broader Management Zone	Cabbage Tree Road	(*)	Unknown	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
POT107	Broader Management Zone	Cabbage Tree Road		Unknown	NT, S=13, N=12, P=0.1826	81.7%	NT, S=-21, N=12, P=0.0678	93.2%	TDn, S=-40, N=11, P=0.0010	99.9%	TDn, S=-28, N=12, P=0.0300	97.0%	NC	n/a	
MW159D	Broader Management Zone	East of base - HWC Pump Station 9 (PS9)	(**)	Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW159S	Broader Management Zone	East of base - HWC Pump Station 9 (PS9)	(**)	Shallow	NC	n/a		NC	n/a	NC	n/a	TUp, S=18, N=10, P=0.0292	97.1%	NC	n/a
MW842	Broader Management Zone	East of base - HWC Pump Station 9 (PS9)		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW844	Broader Management Zone	East of base - HWC Pump Station 9 (PS9)	(**)	Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW142D	Broader Management Zone	Fullerton Cove		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW142S	Broader Management Zone	Fullerton Cove		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW231D	Broader Management Zone	Fullerton Cove		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW231S	Broader Management Zone	Fullerton Cove		Shallow	NC	n/a	NT, S=24, N=14, P=0.0818	91.8%	NT, S=1, N=14, P=0.5000	50.0%	NT, S=16, N=14, P=0.1935	80.7%	NC	n/a	
MW232D	Broader Management Zone	Fullerton Cove		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW232S	Broader Management Zone	Fullerton Cove		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW266D	Broader Management Zone	Fullerton Cove	(*)	Deep	NC	n/a		NC	n/a	NT, S=3, N=7, P=0.3793	62.1%	NT, S=-5, N=7, P=0.2694	73.1%	NC	n/a
MW266S	Broader Management Zone	Fullerton Cove		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW270D	Broader Management Zone	Fullerton Cove		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW270S	Broader Management Zone	Fullerton Cove		Shallow	NT, S=20, N=11, P=0.0588	94.1%	TUp, S=29, N=11, P=0.0081	99.2%	TUp, S=24, N=11, P=0.0291	97.1%	TUp, S=29, N=11, P=0.0108	98.9%	NC	n/a	
MW538	Broader Management Zone	Fullerton Cove		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
POT236	Broader Management Zone	Fullerton Cove	(*)	Unknown	NC	n/a	NT, S=-6, N=7, P=0.2184	78.2%	NT, S=-7, N=7, P=0.1838	81.6%	NT, S=-9, N=7, P=0.1020	89.8%	NC	n/a	
POT303	Broader Management Zone	Fullerton Cove		Unknown	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
POT365	Broader Management Zone	Fullerton Cove		Unknown	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
POT382	Broader Management Zone	Fullerton Cove		Unknown	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW128D	Broader Management Zone	Lavis Lane		Deep	NC	n/a	TUp, S=50, N=21, P=0.0148	98.5%	NC	n/a	TUp, S=46, N=20, P=0.0176	98.2%	NC	n/a	
MW128S	Broader Management Zone	Lavis Lane		Shallow	NC	n/a	NT, S=-2, N=19, P=0.4803	52.0%	NT, S=20, N=18, P=0.1594	84.1%	NT, S=19, N=19, P=0.2062	79.4%	NC	n/a	
MW163	Broader Management Zone	Lavis Lane		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW316D	Broader Management Zone	Lavis Lane		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW118	Broader Management Zone	Salt Ash		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW165	Broader Management Zone	Salt Ash	(*)	Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW252S	Broader Management Zone	Salt Ash	(*)	Shallow	TDn, S=-15, N=7, P=0.0131	98.7%	TDn, S=-17, N=7, P=0.0081	99.2%	TDn, S=-13, N=7, P=0.0358	96.4%	TDn, S=-19, N=7, P=0.0034	99.7%	TDn, S=-14, N=7, P=0.0216	97.8%	
POT144	Broader Management Zone	Salt Ash		Unknown	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW280S	Broader Management Zone	West of base	(**)	Shallow	NT, S=-34, N=30, P=0.2326	76.7%	NT, S=-54, N=30, P=0.1109	88.9%	TUp, S=95, N=29, P=0.0331	96.7%	NT, S=32, N=29, P=0.2723	72.8%	NT, S=-18, N=29, P=0.3346	66.5%	
MW137	Outside Broader Management Zone	Cabbage Tree Road		Shallow	NC	n/a		NC	n/a	NC	n/a	NT, S=1, N=11, P=0.5000	50.0%	NC	n/a
MW264D	Outside Broader Management Zone	North of base - Background		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW264S	Outside Broader Management Zone	North of base - Background		Shallow	NC	n/a		NC	n/a	NT, S=3, N=9, P=0.4083	59.2%	NT, S=3, N=9, P=0.4083	59.2%	NC	n/a
MW262D	Outside Broader Management Zone	Salt Ash		Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW262S	Outside Broader Management Zone	Salt Ash		Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW241D	Outside Broader Management Zone	West of base	(**)	Deep	NC	n/a		NC	n/a	NC	n/a	NC	n/a		
MW241S	Outside Broader Management Zone	West of base	(**)	Shallow	NC	n/a		NC	n/a	NC	n/a	NC	n/a		

Notes
NT No Trend
NT, LH No Trend, Last sample is the Highest
TDn Trending Down
TDn, LH Trending Down, Last sample is the Highest
Tup Trending Up
Tup, LH Trending Up, Last sample is the Highest
CF = Confidence Factor
S = Mann-Kendall Score
N = Number of Samples
P = p-Value
(*) = Location not sample for OMP in 2025
(**) = Contains some data considered anomalous/erroneous and unrepresentative, location resampled.

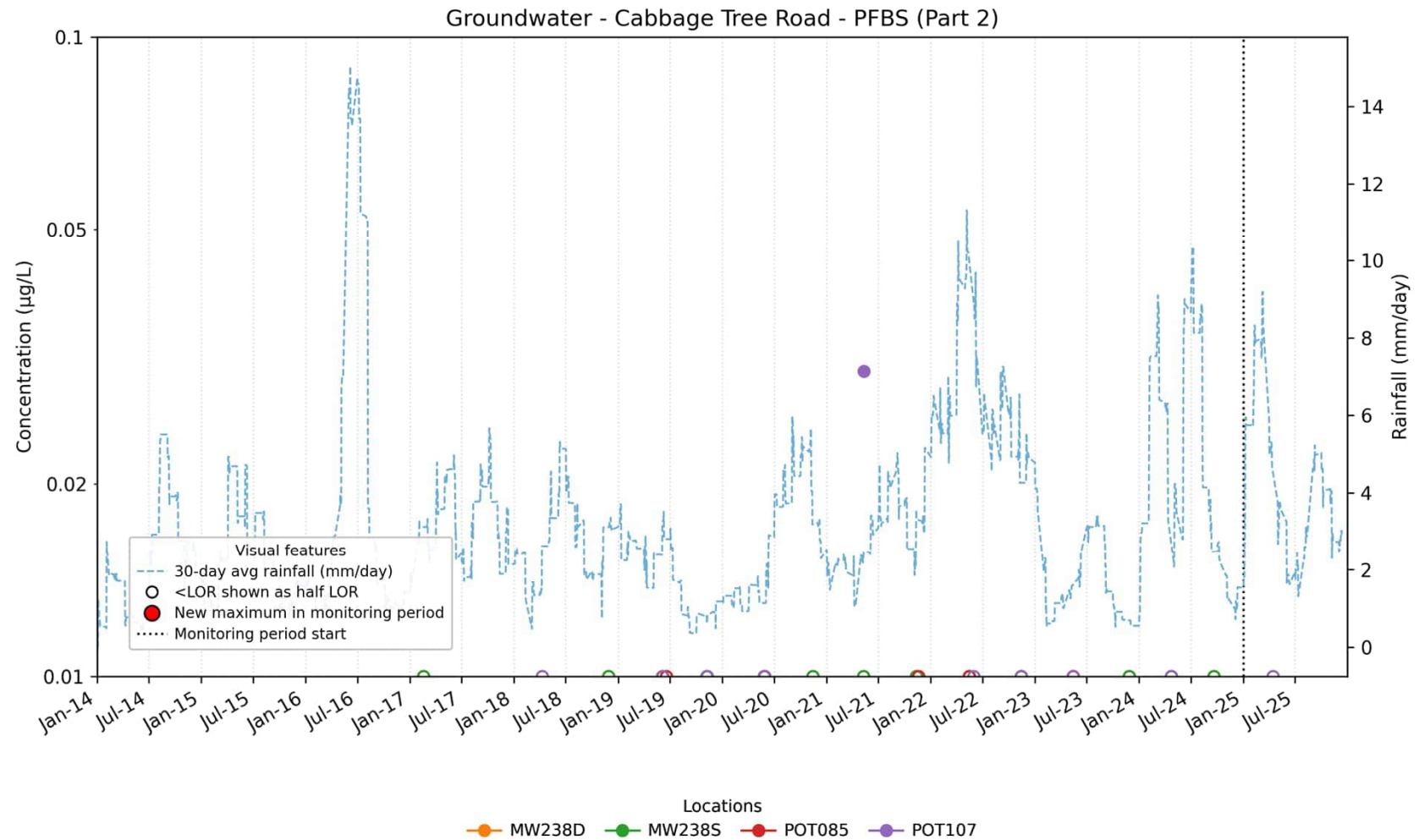
Appendix C

Temporal trend graphs

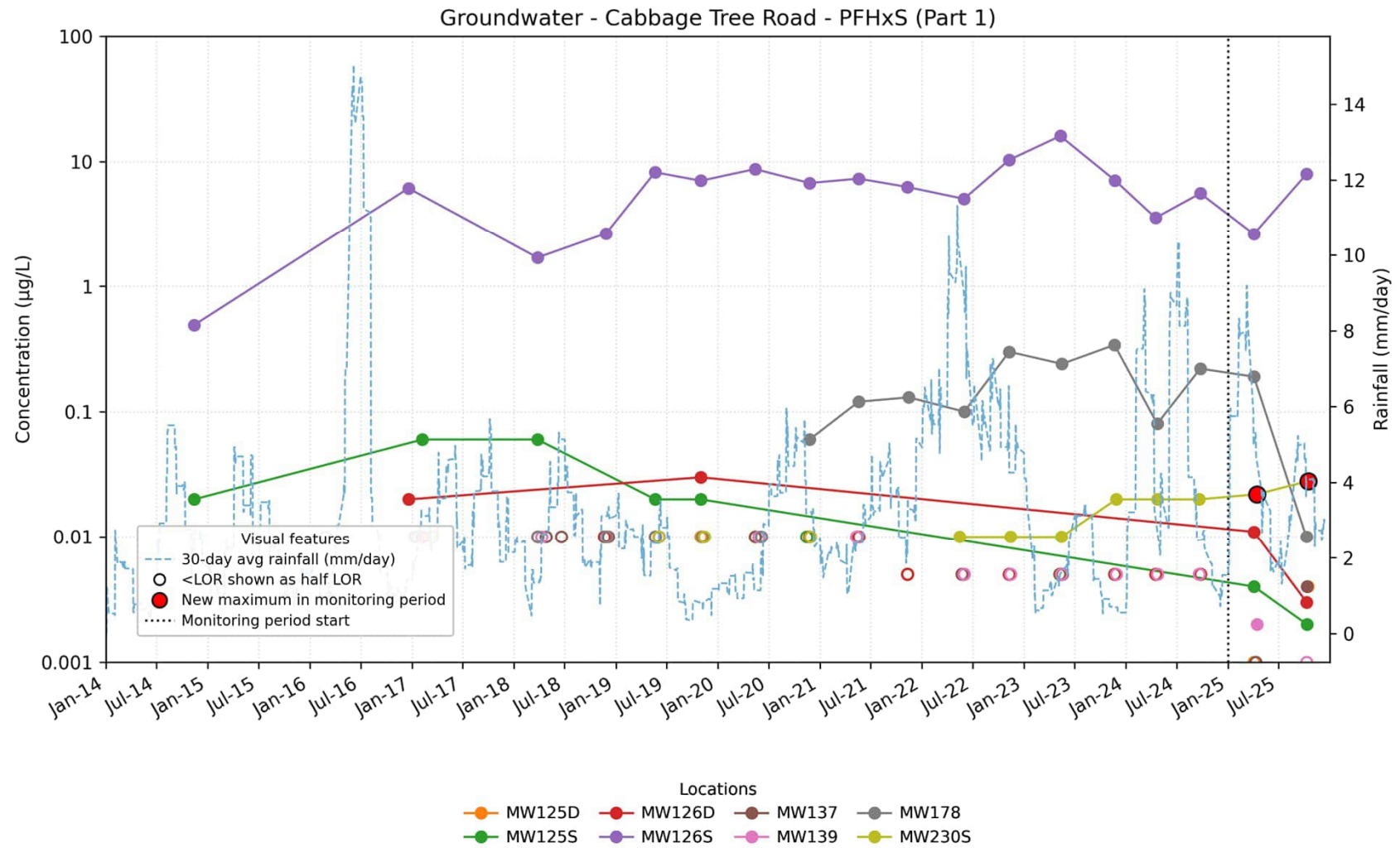
Graph G01 - Temporal Trend



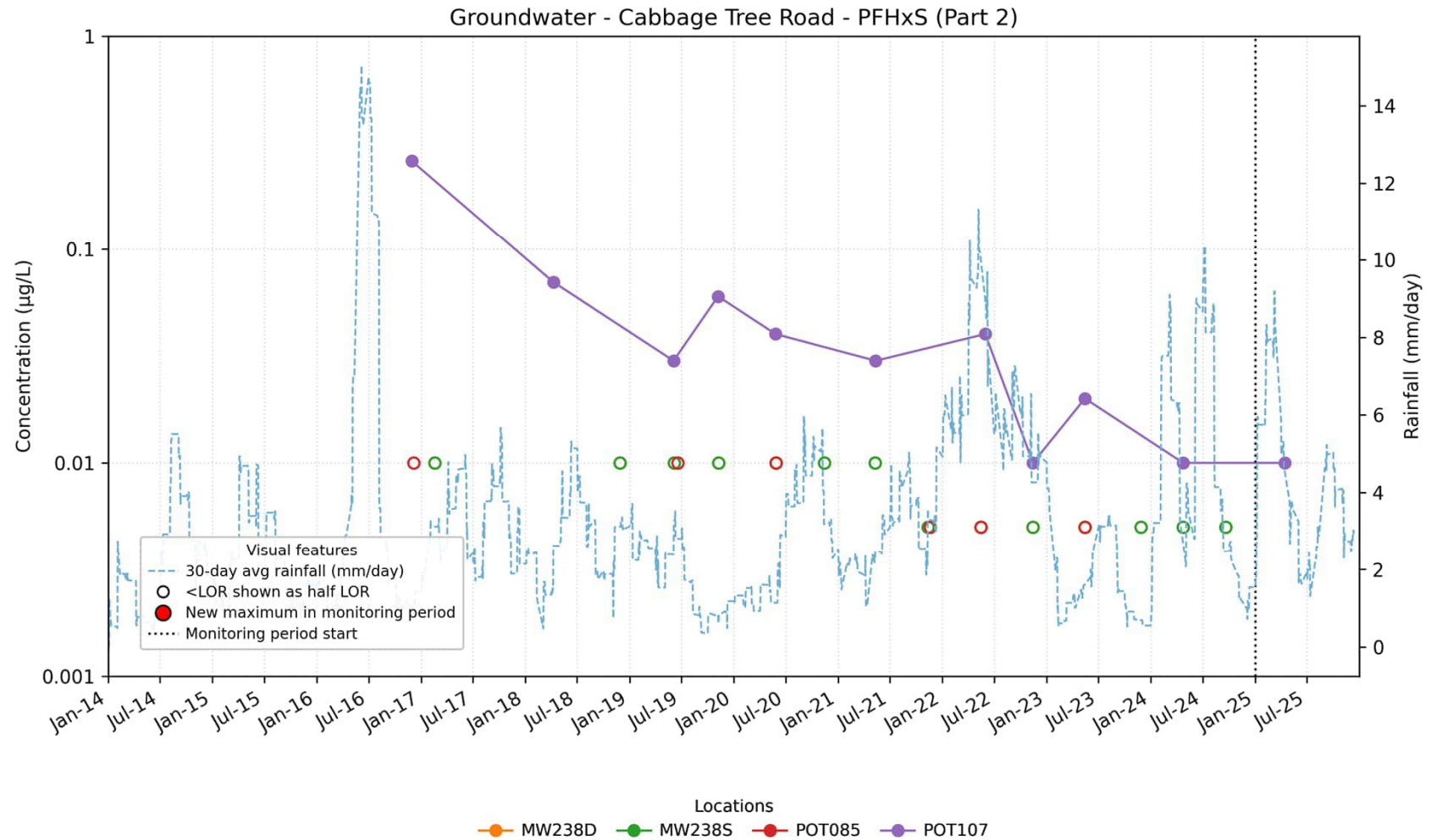
Graph G02 - Temporal Trend



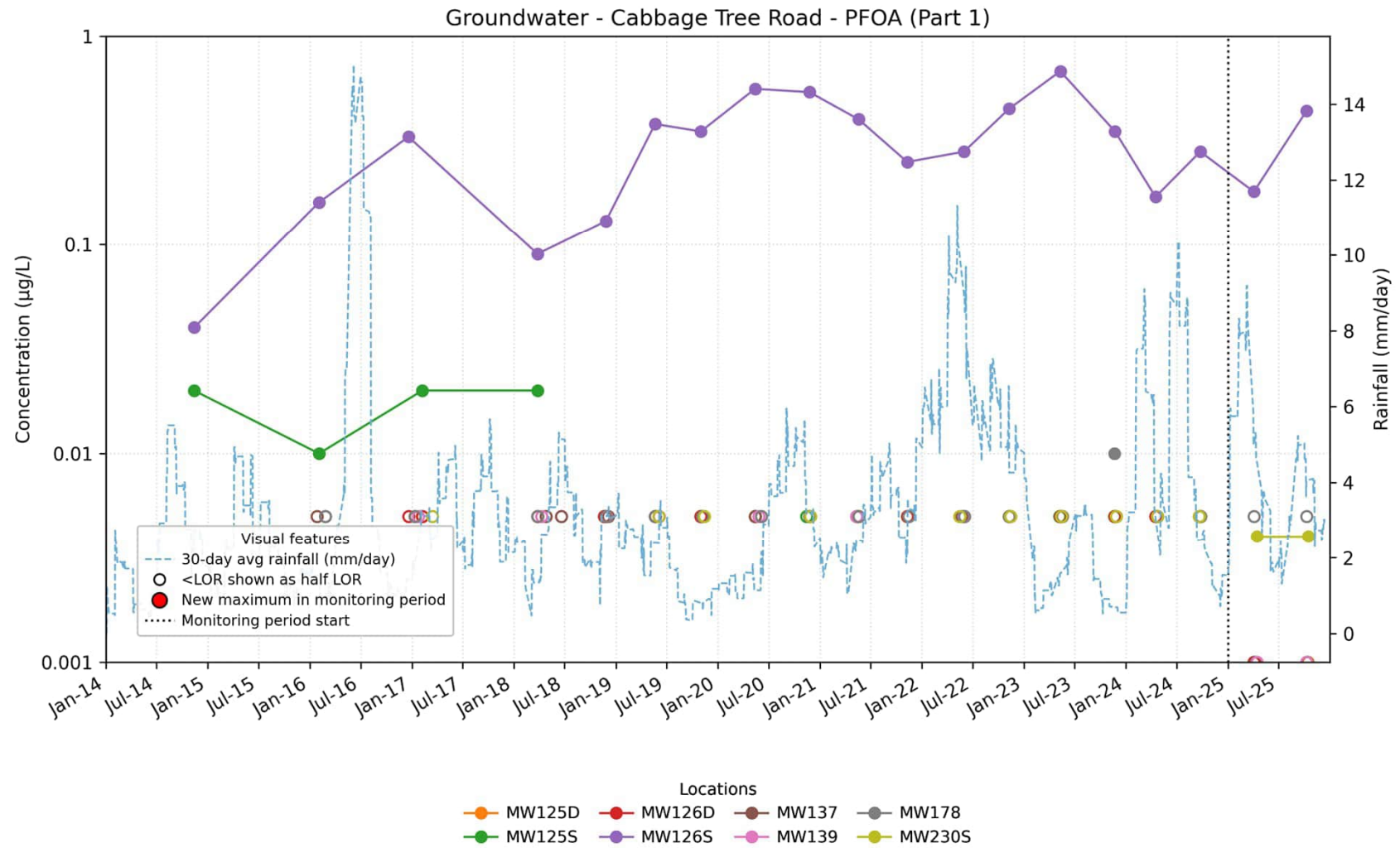
Graph G03 - Temporal Trend



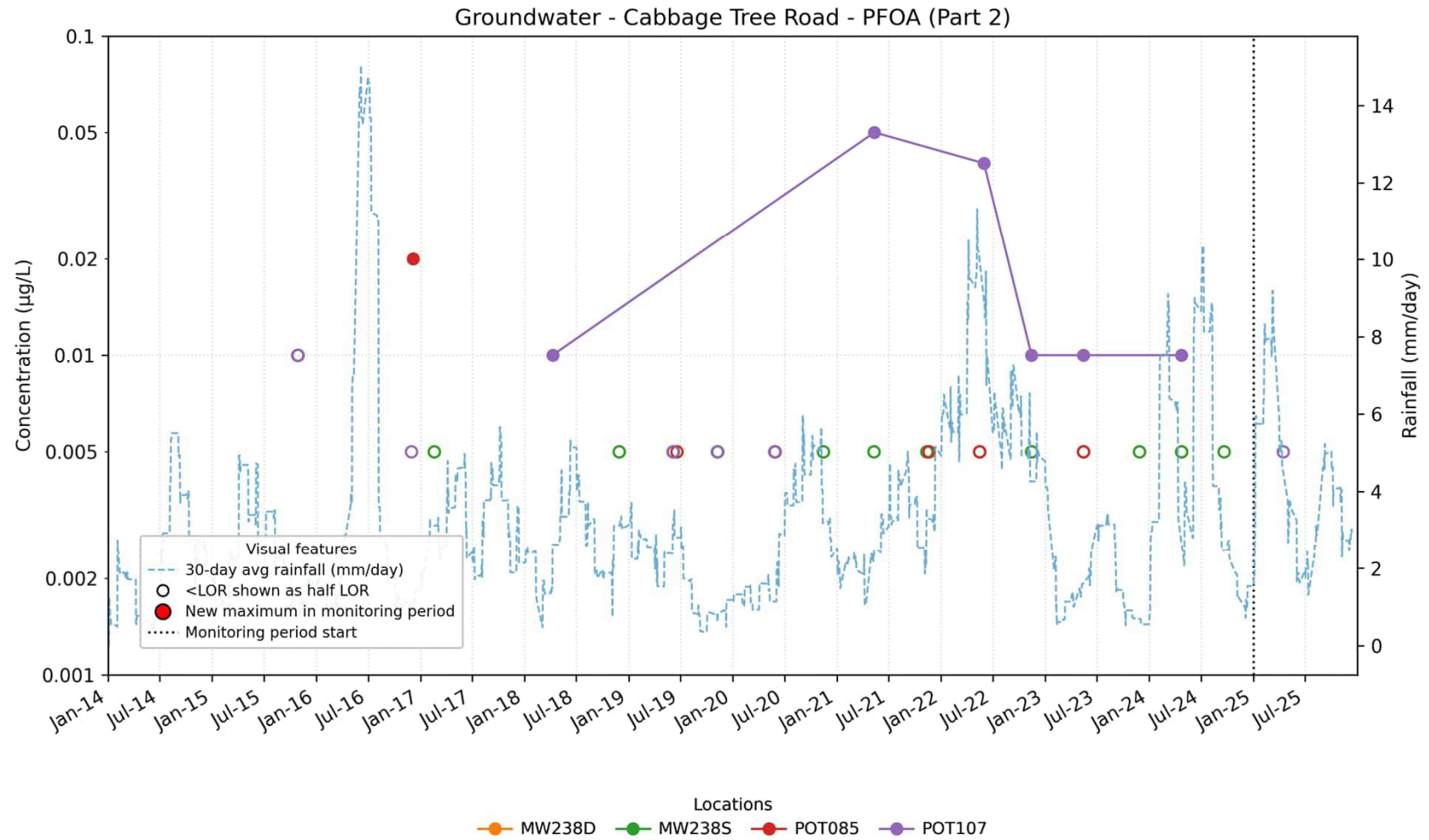
Graph G04 - Temporal Trend



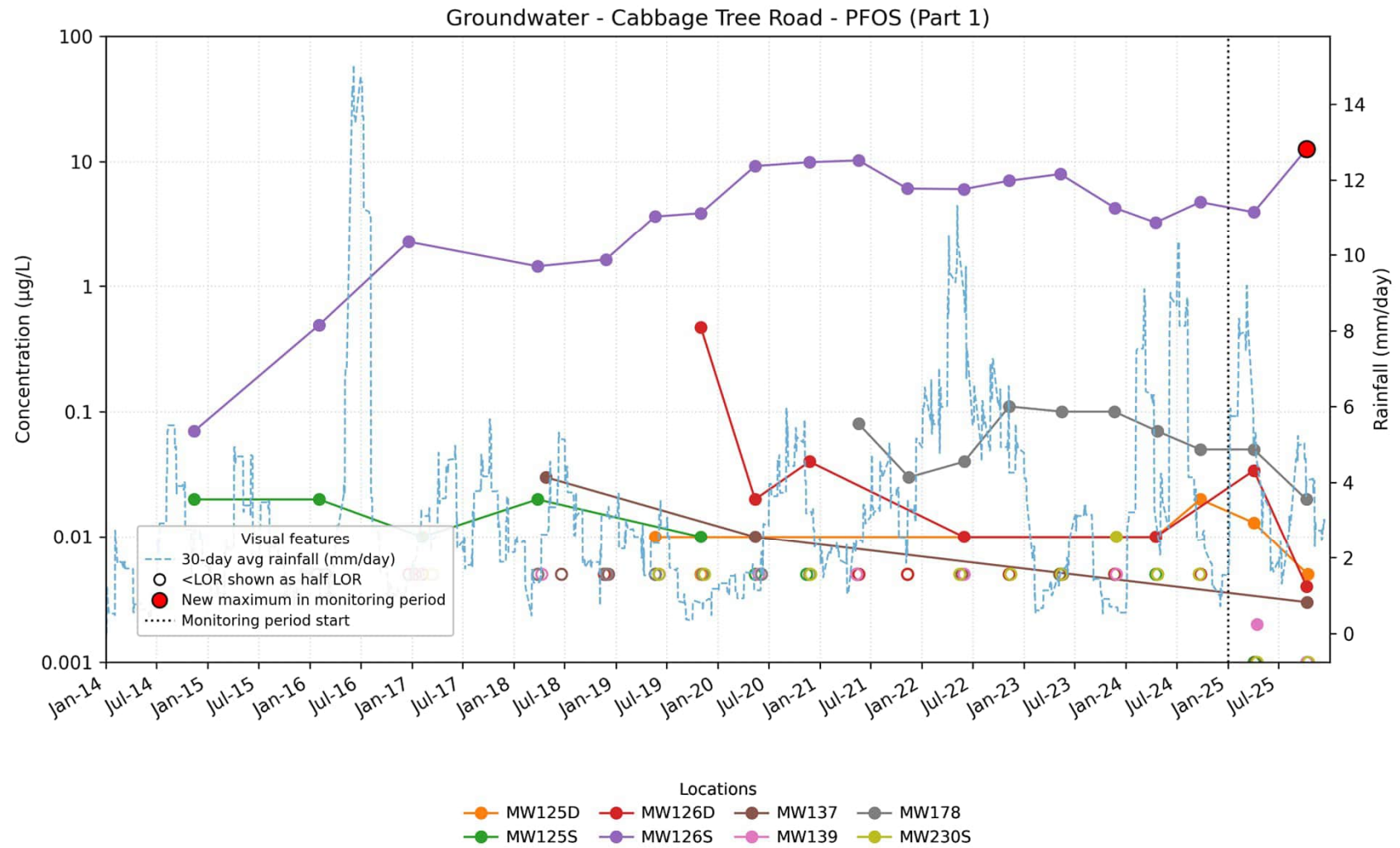
Graph G05 - Temporal Trend



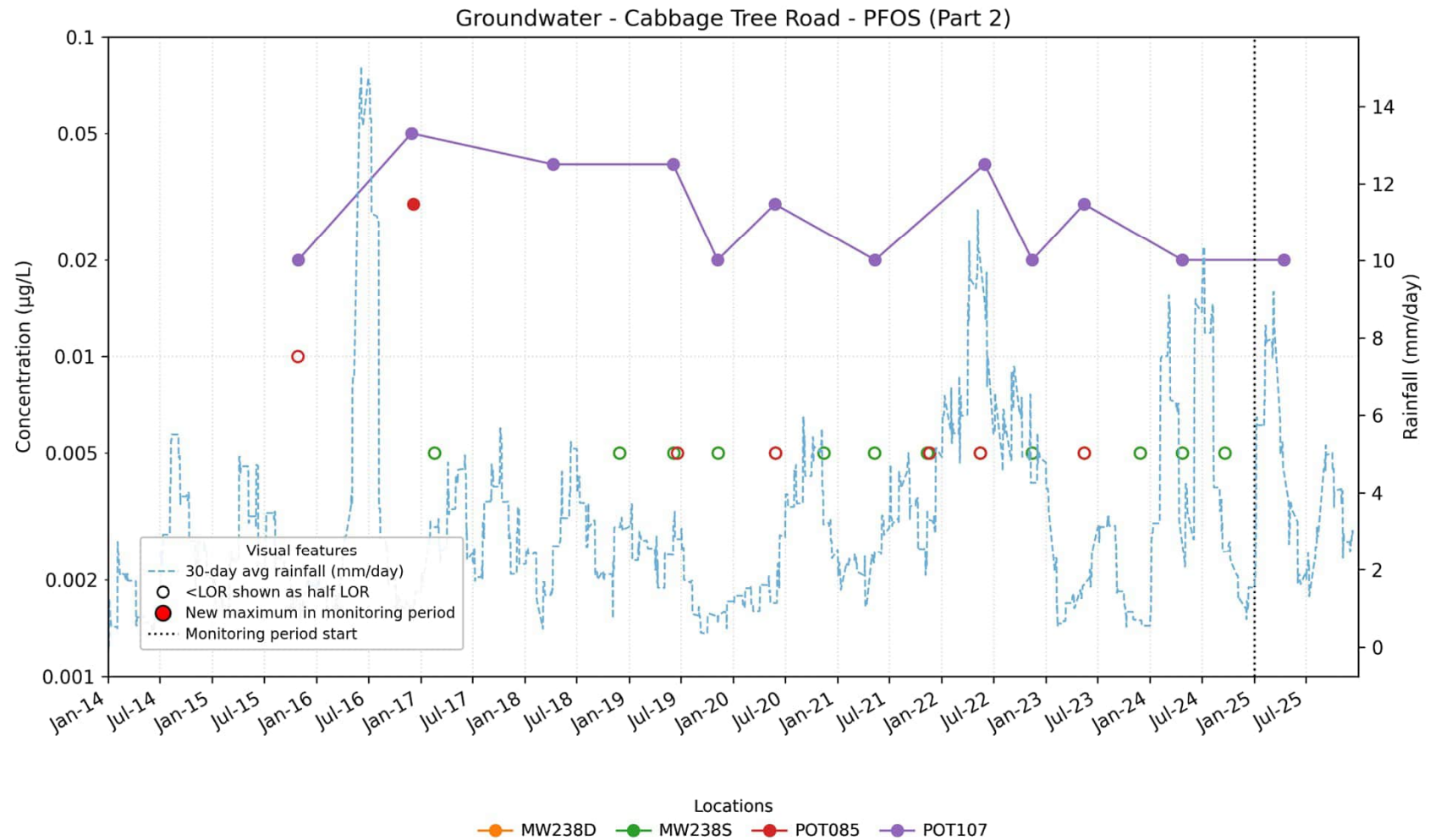
Graph G06 - Temporal Trend



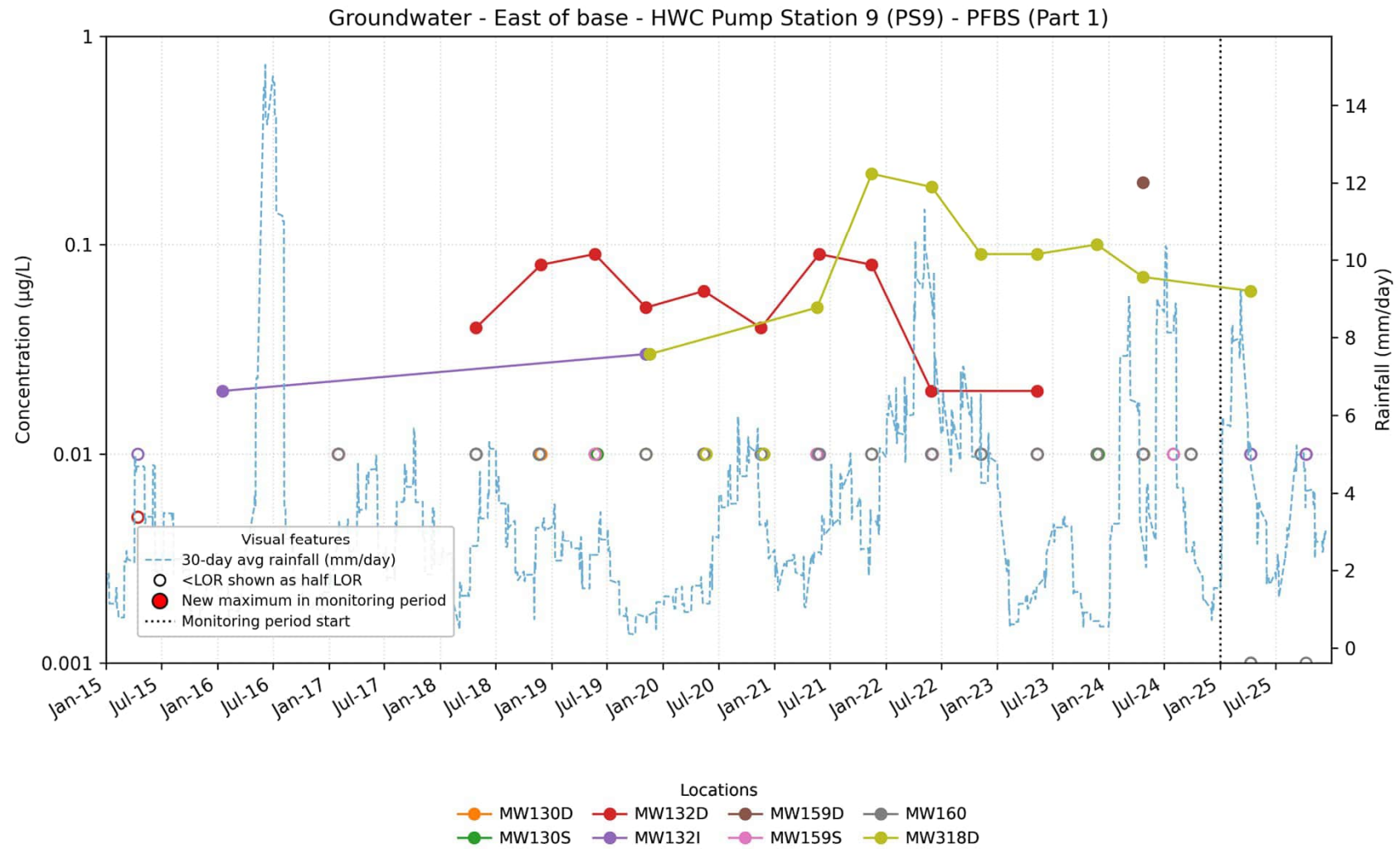
Graph G07 - Temporal Trend



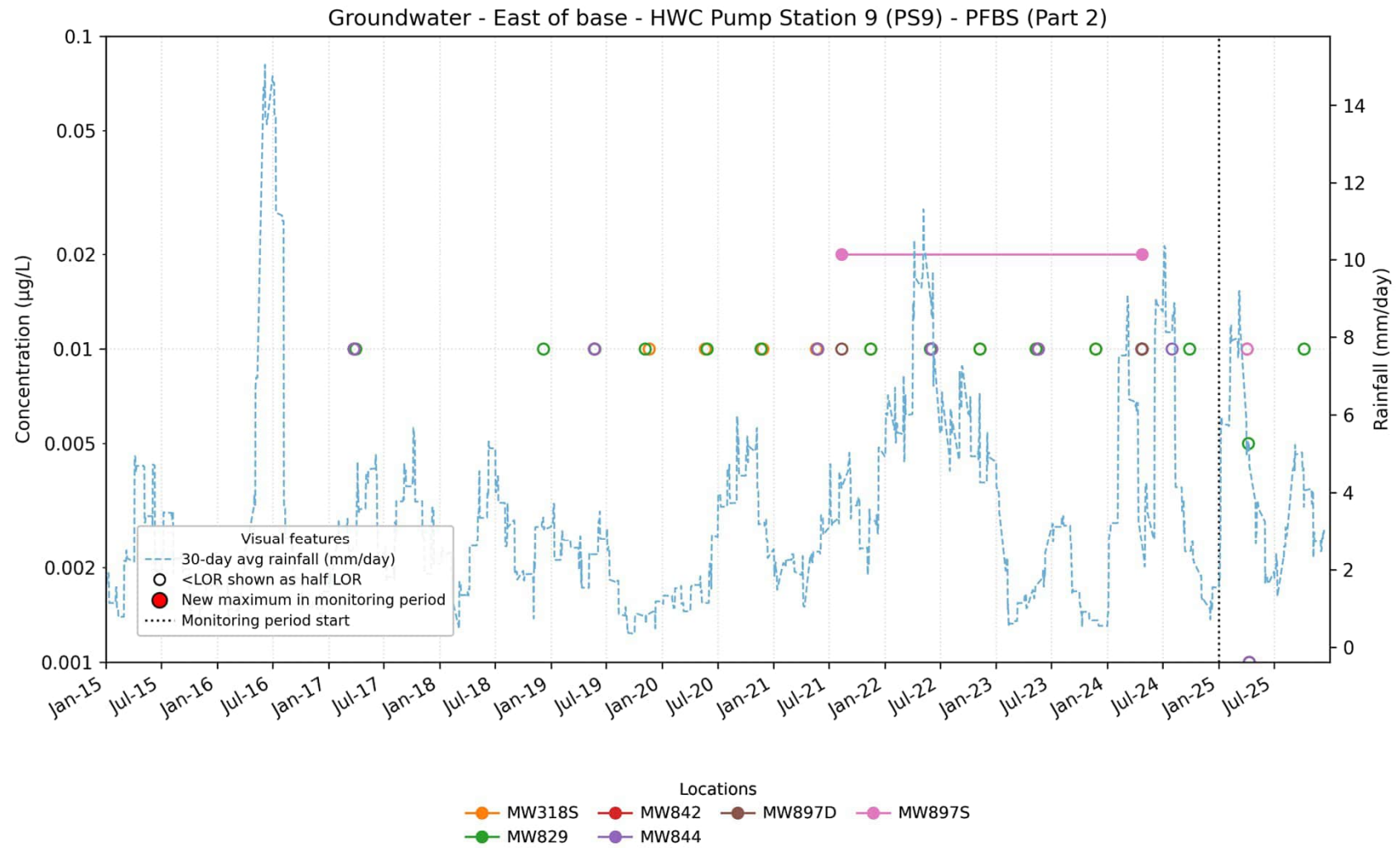
Graph G08 - Temporal Trend



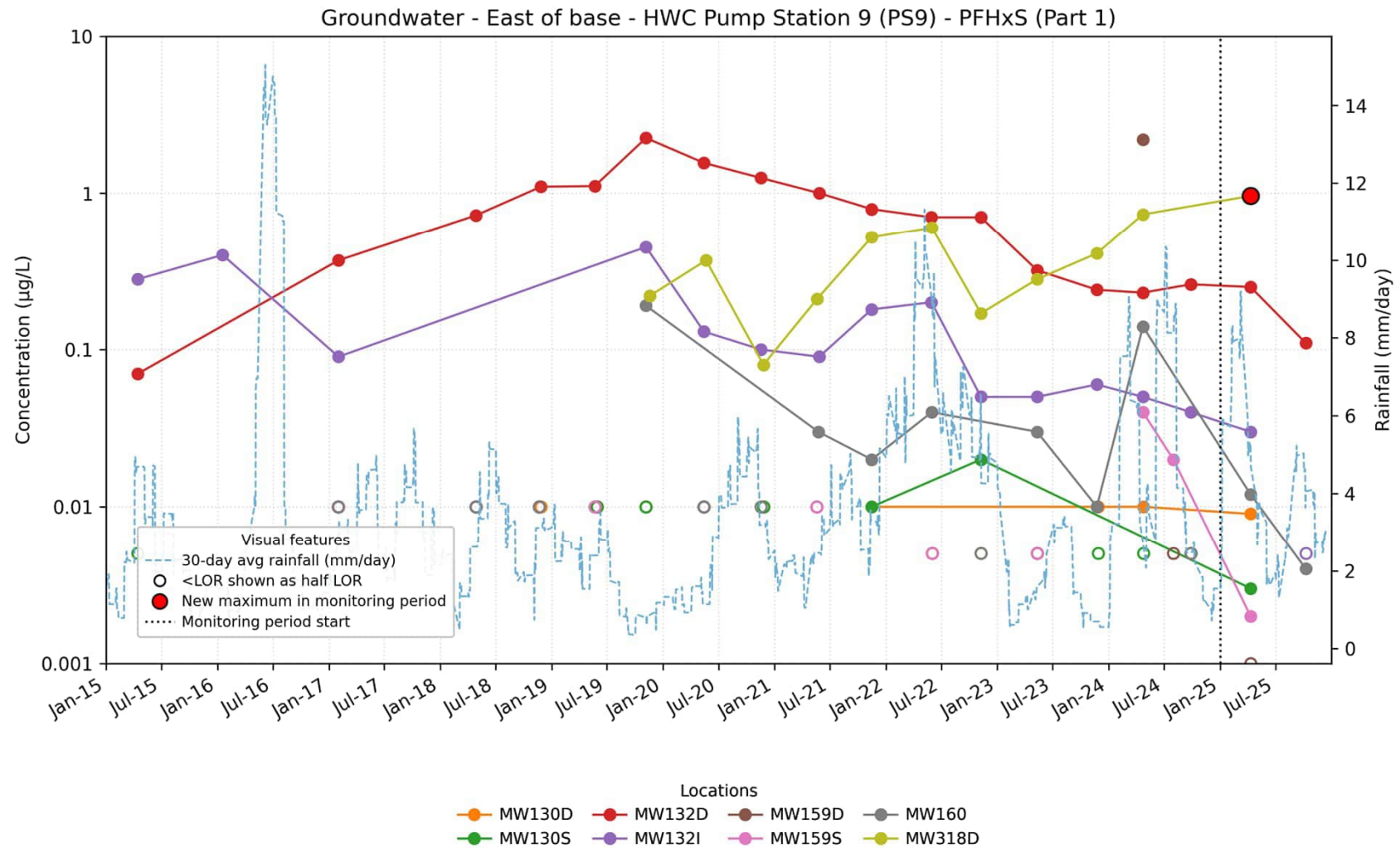
Graph G09 - Temporal Trend



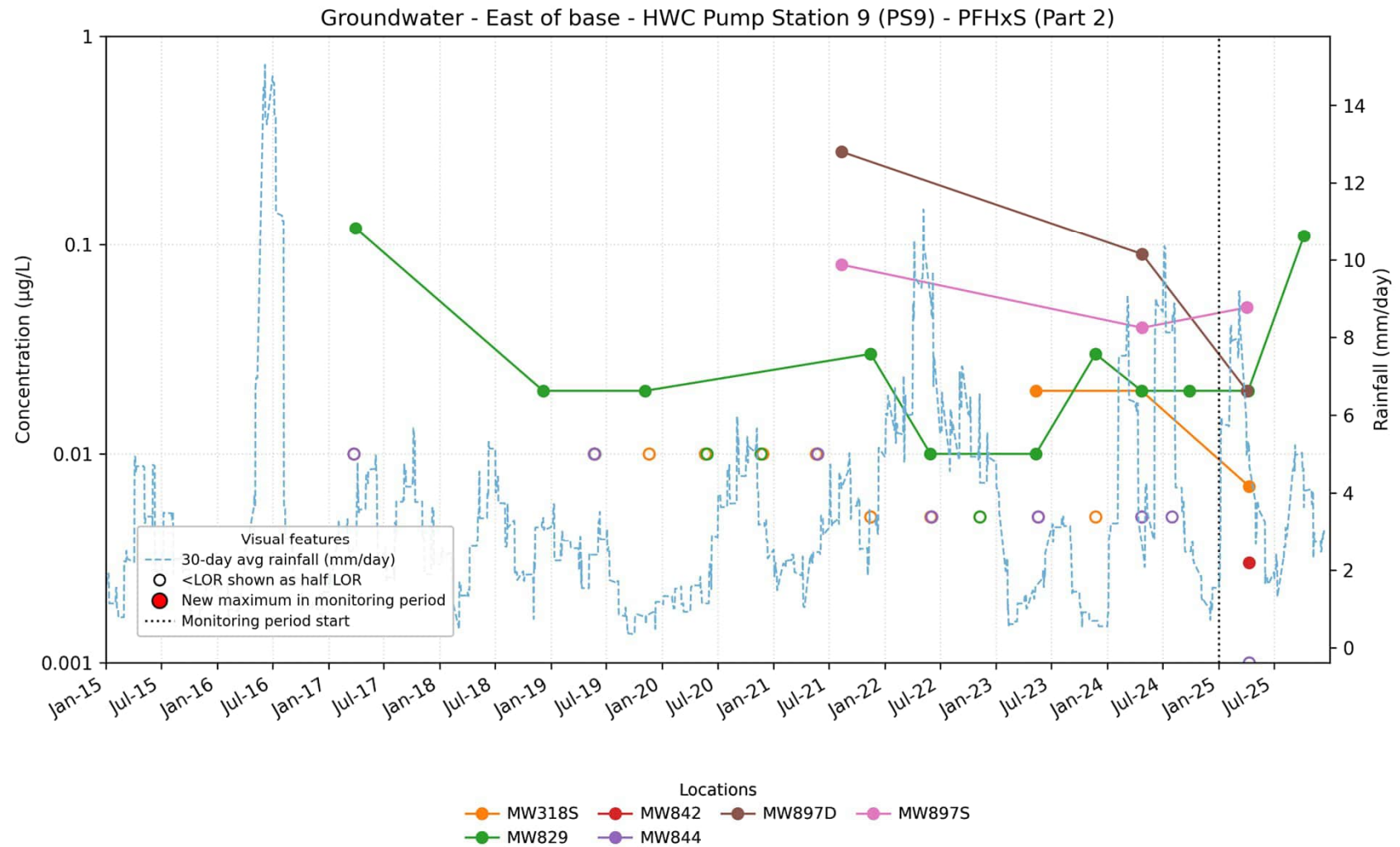
Graph G10 - Temporal Trend



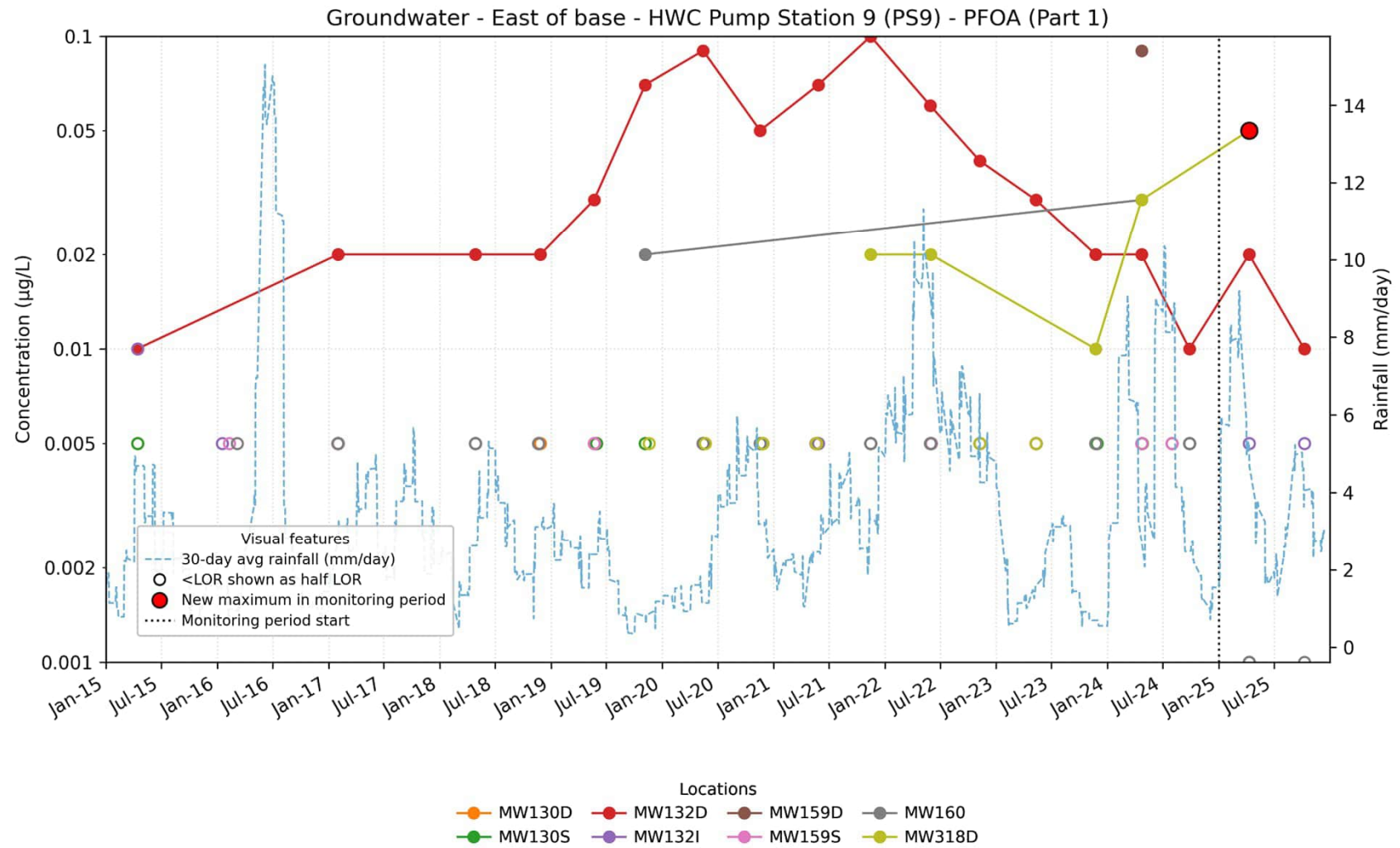
Graph G11 - Temporal Trend



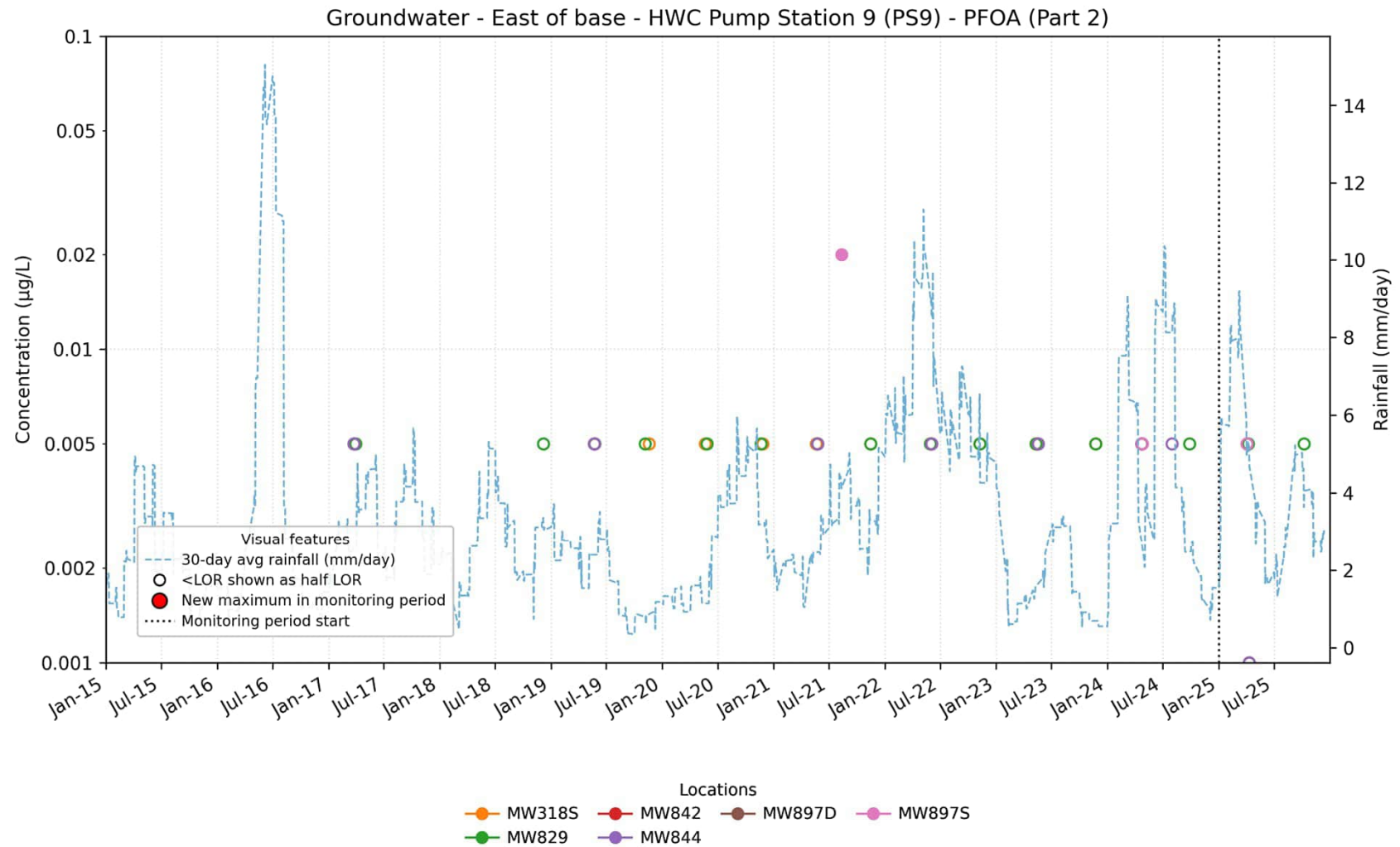
Graph G12 - Temporal Trend



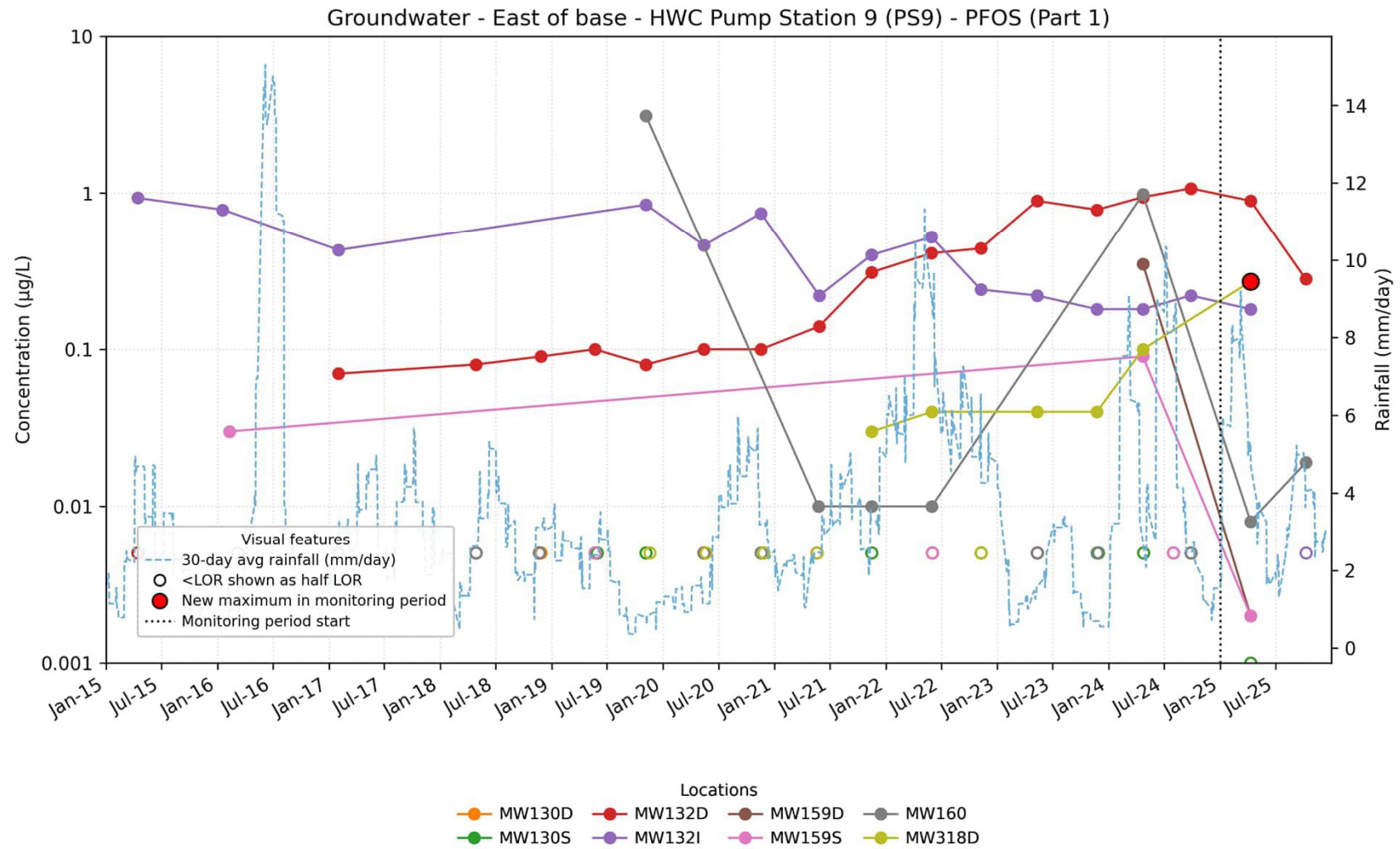
Graph G13 - Temporal Trend



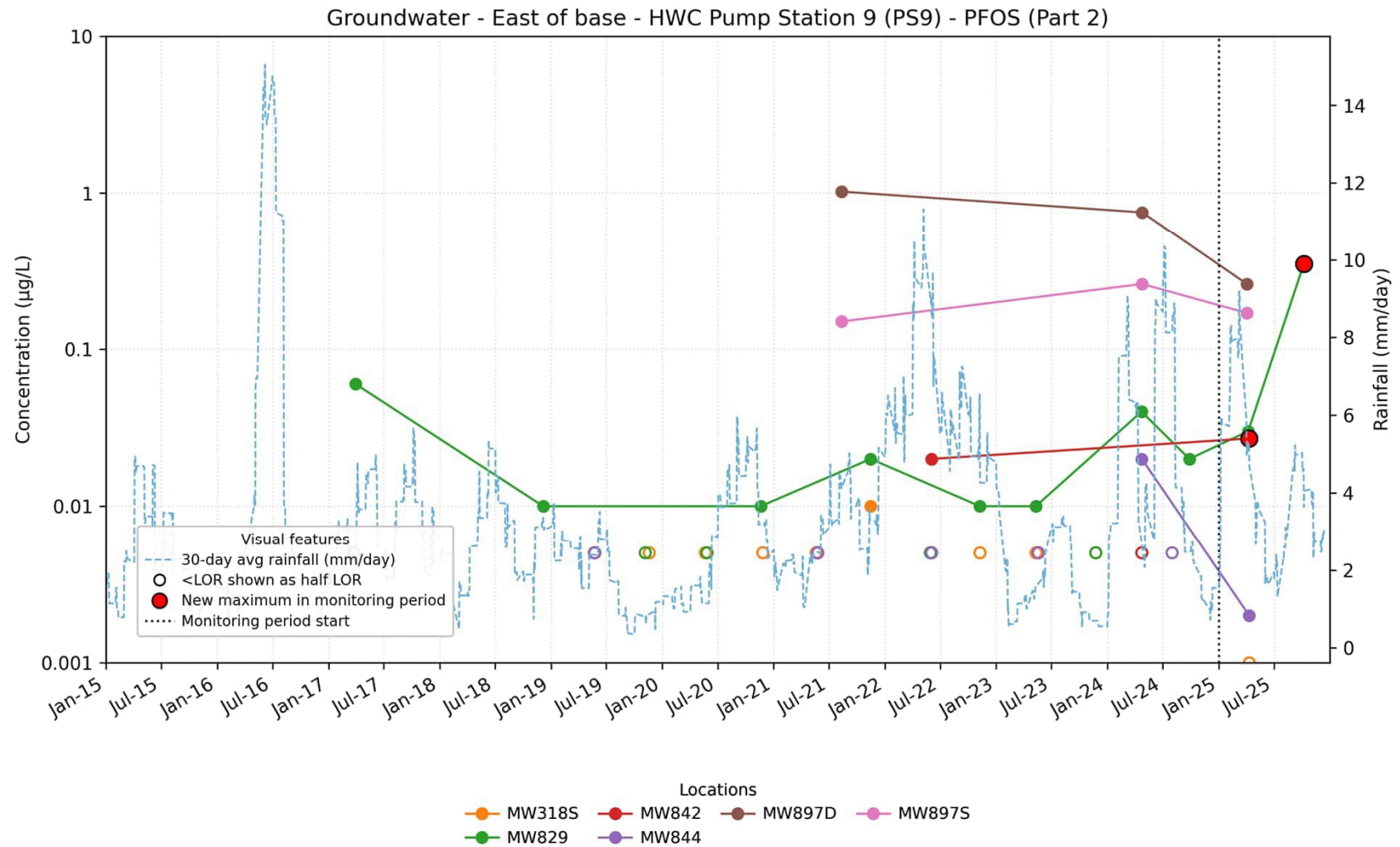
Graph G14 - Temporal Trend



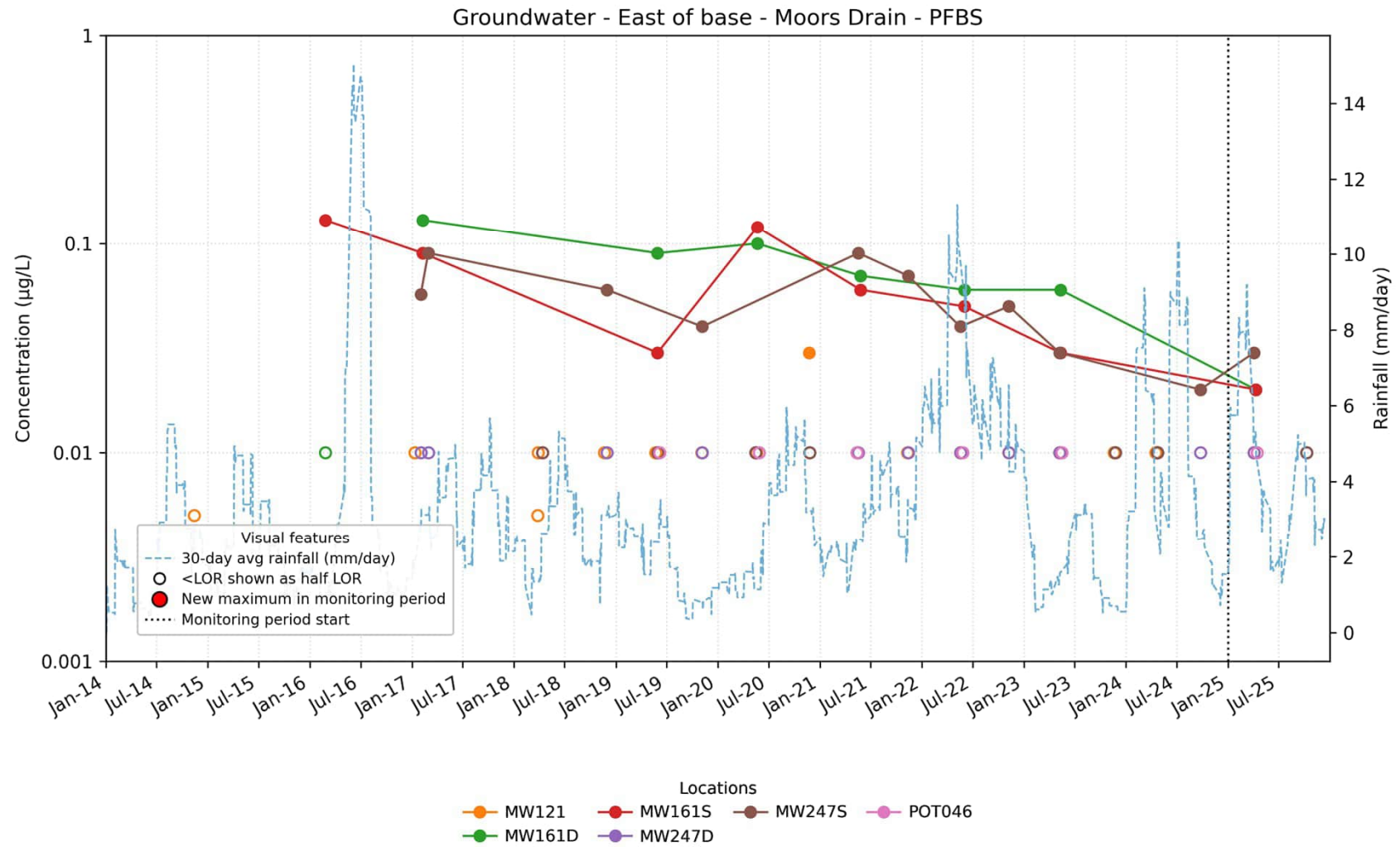
Graph G15 - Temporal Trend



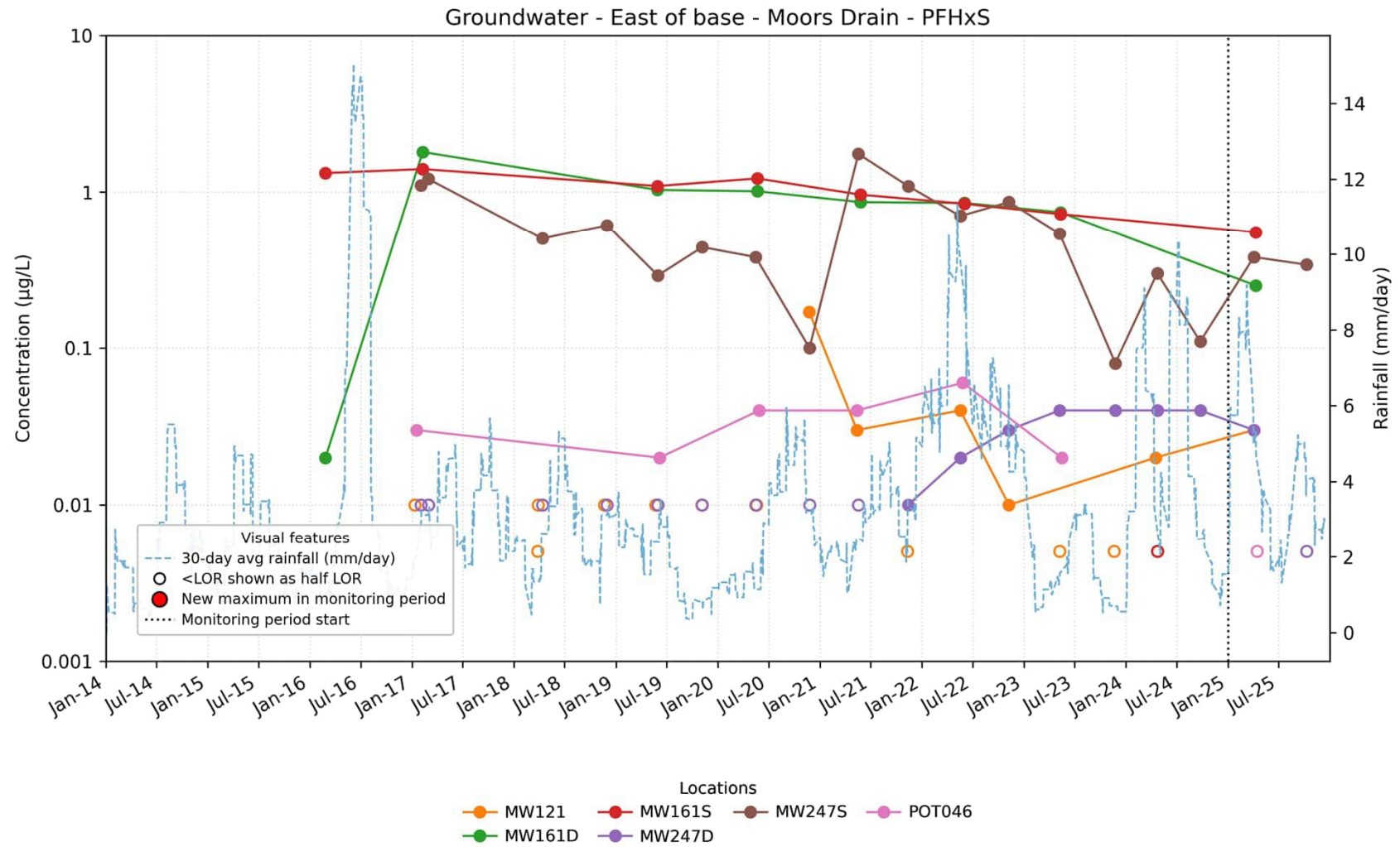
Graph G16 - Temporal Trend



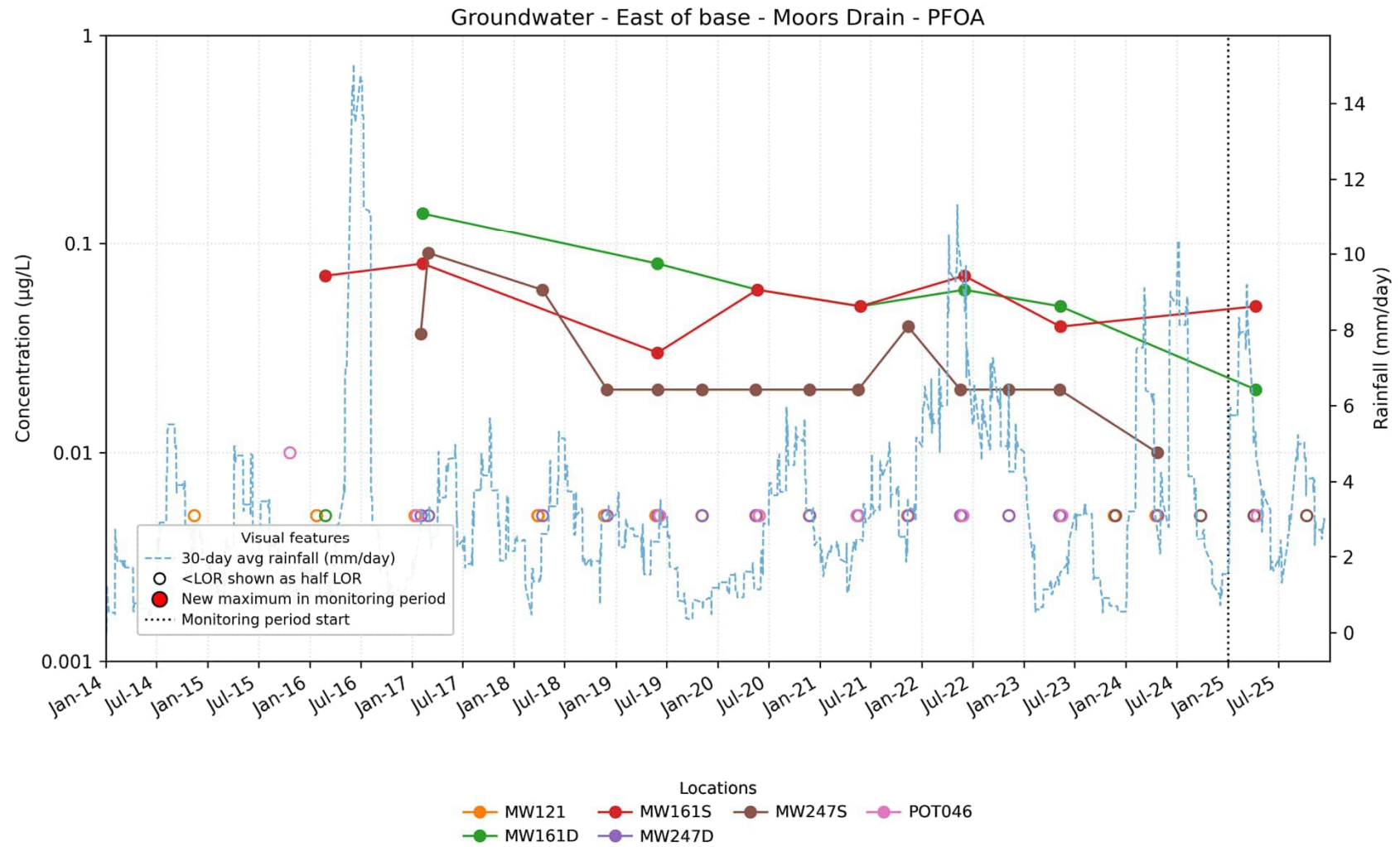
Graph G17 - Temporal Trend



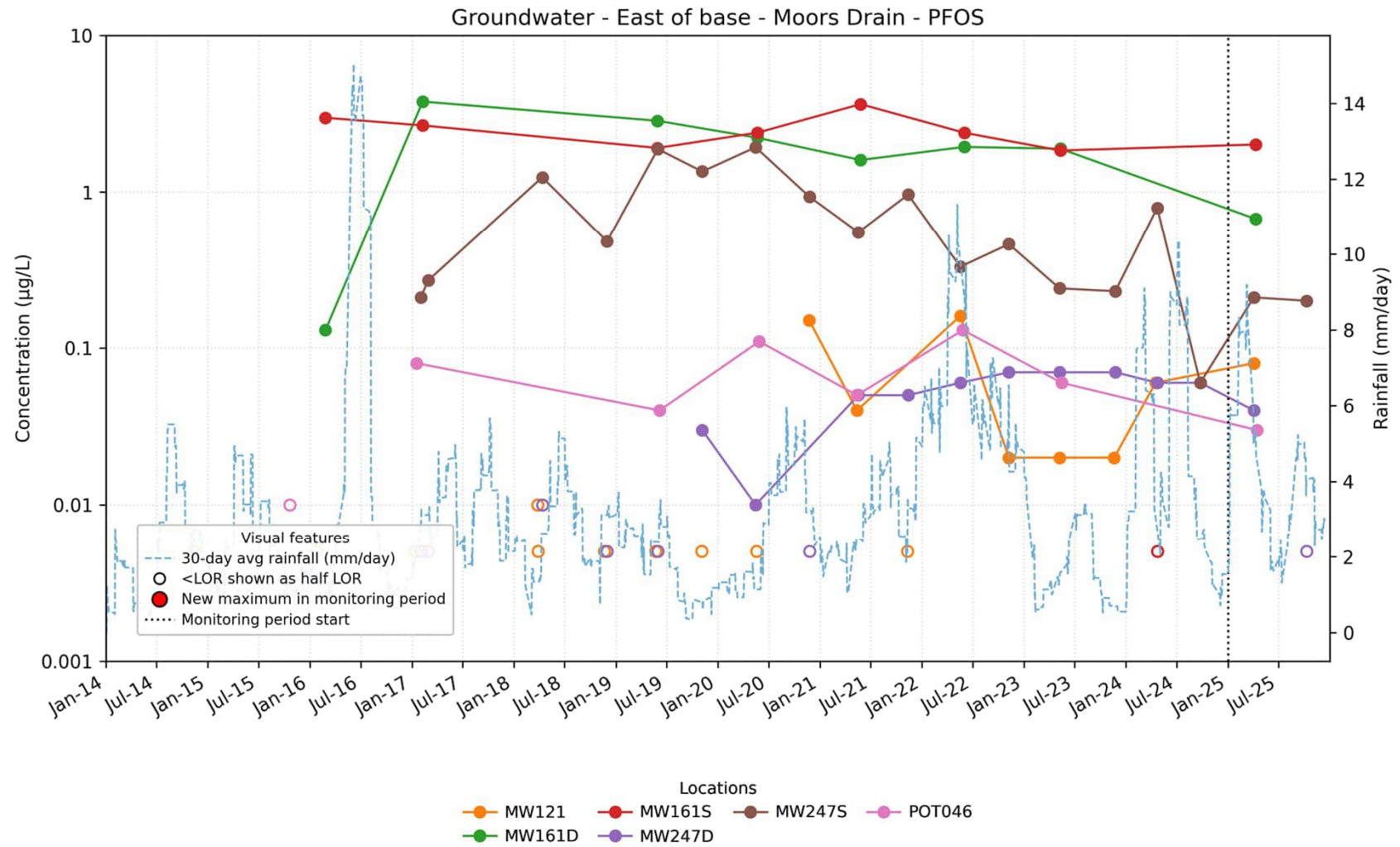
Graph G18 - Temporal Trend



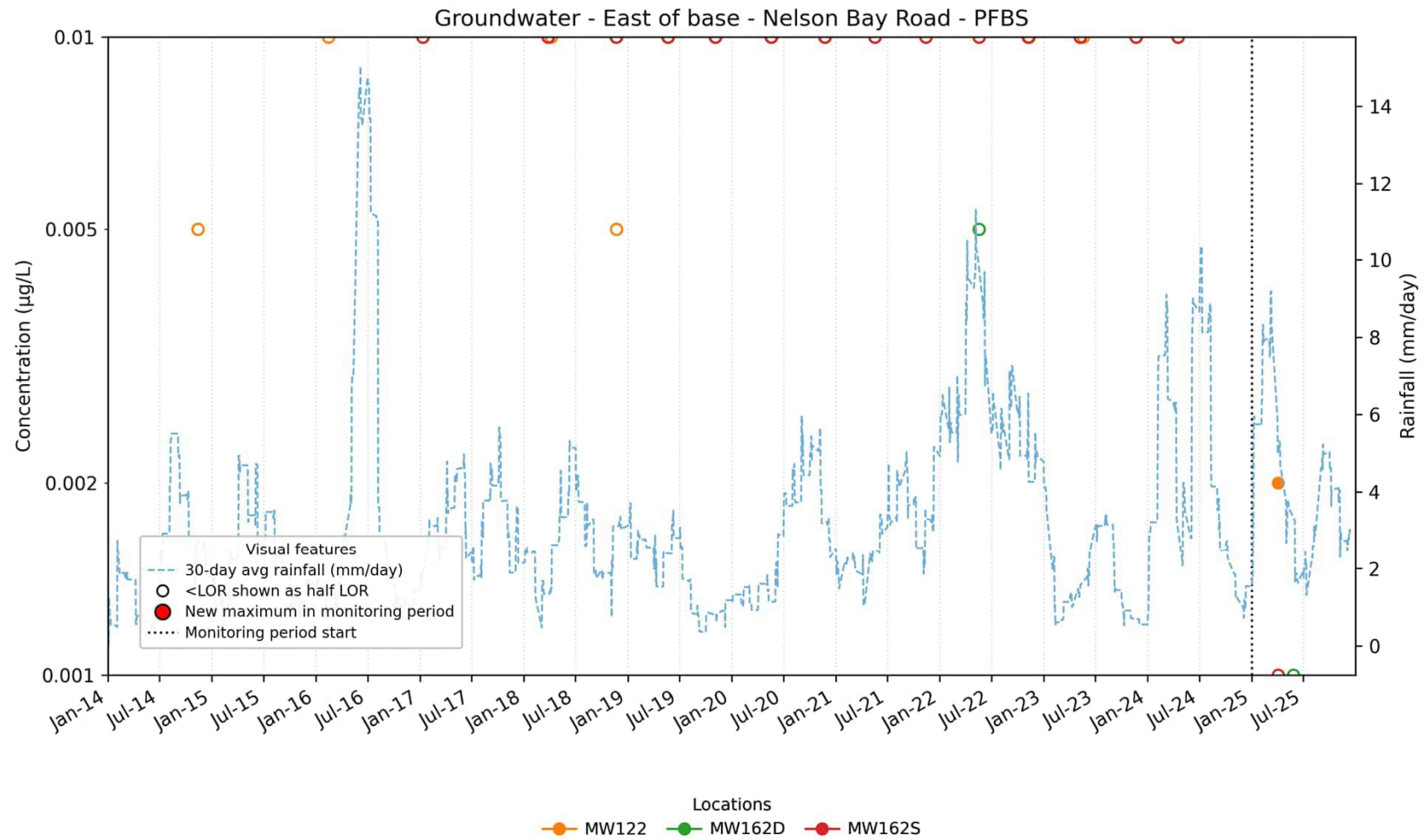
Graph G19 - Temporal Trend



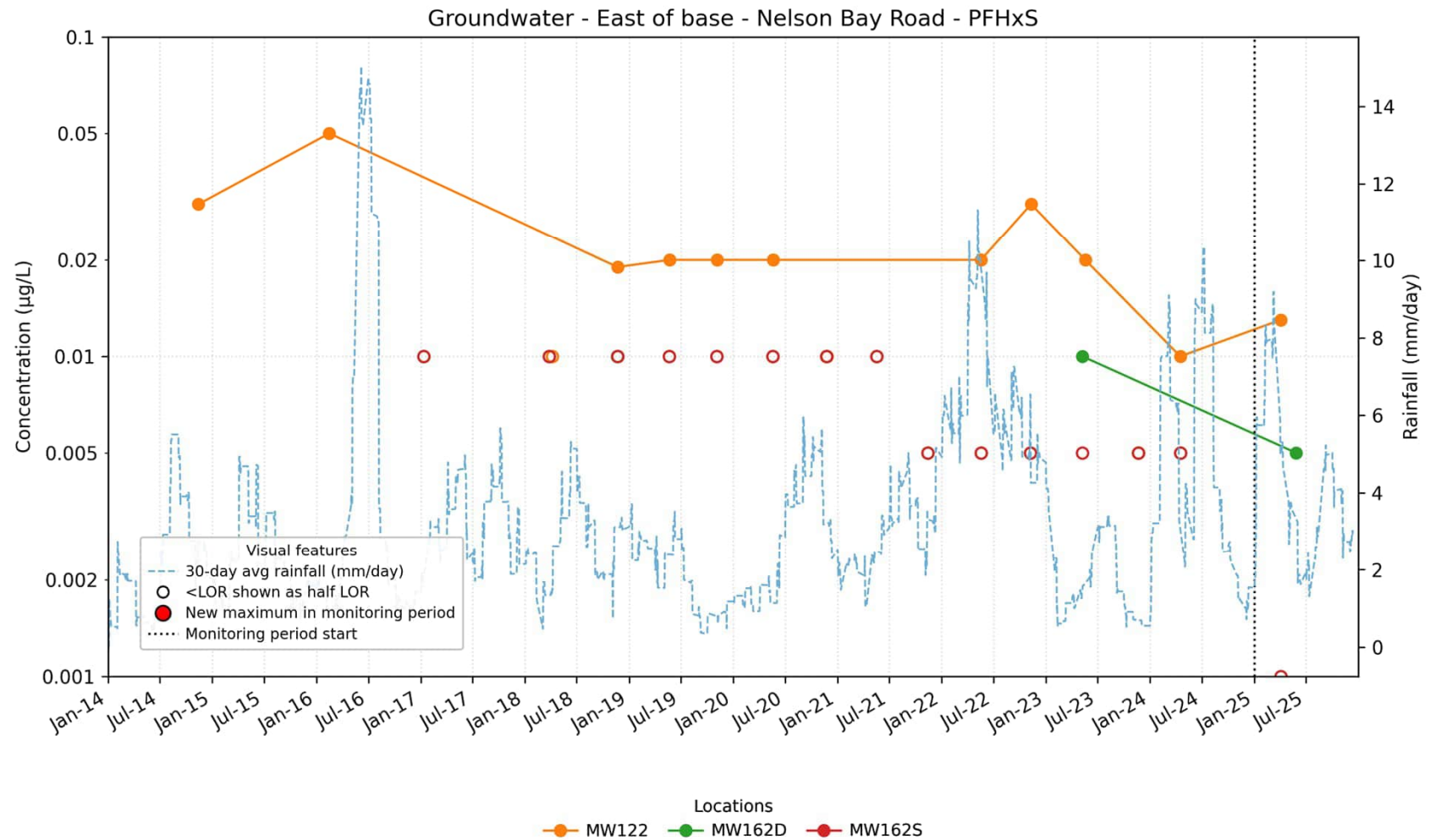
Graph G20 - Temporal Trend



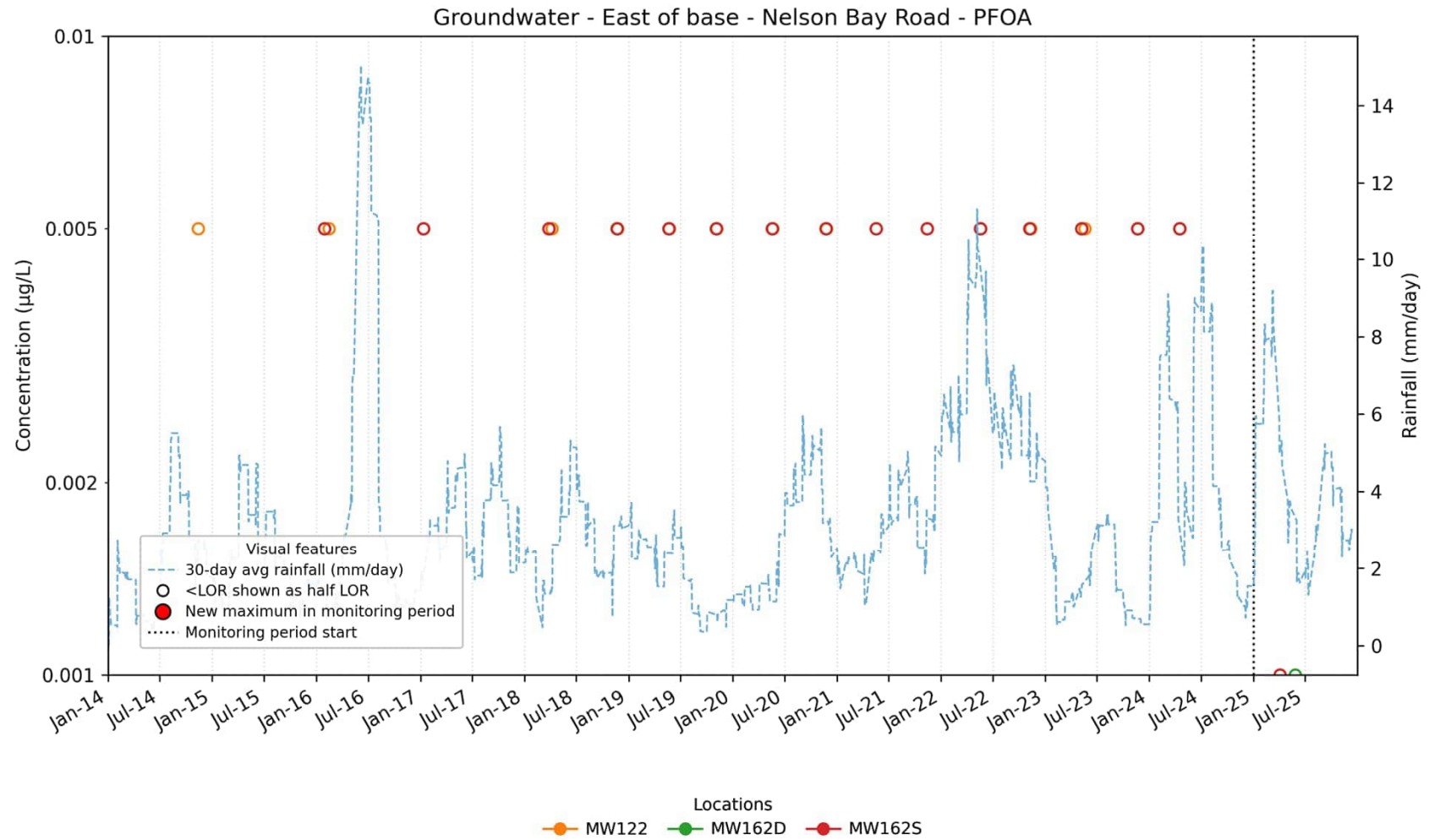
Graph G21 - Temporal Trend



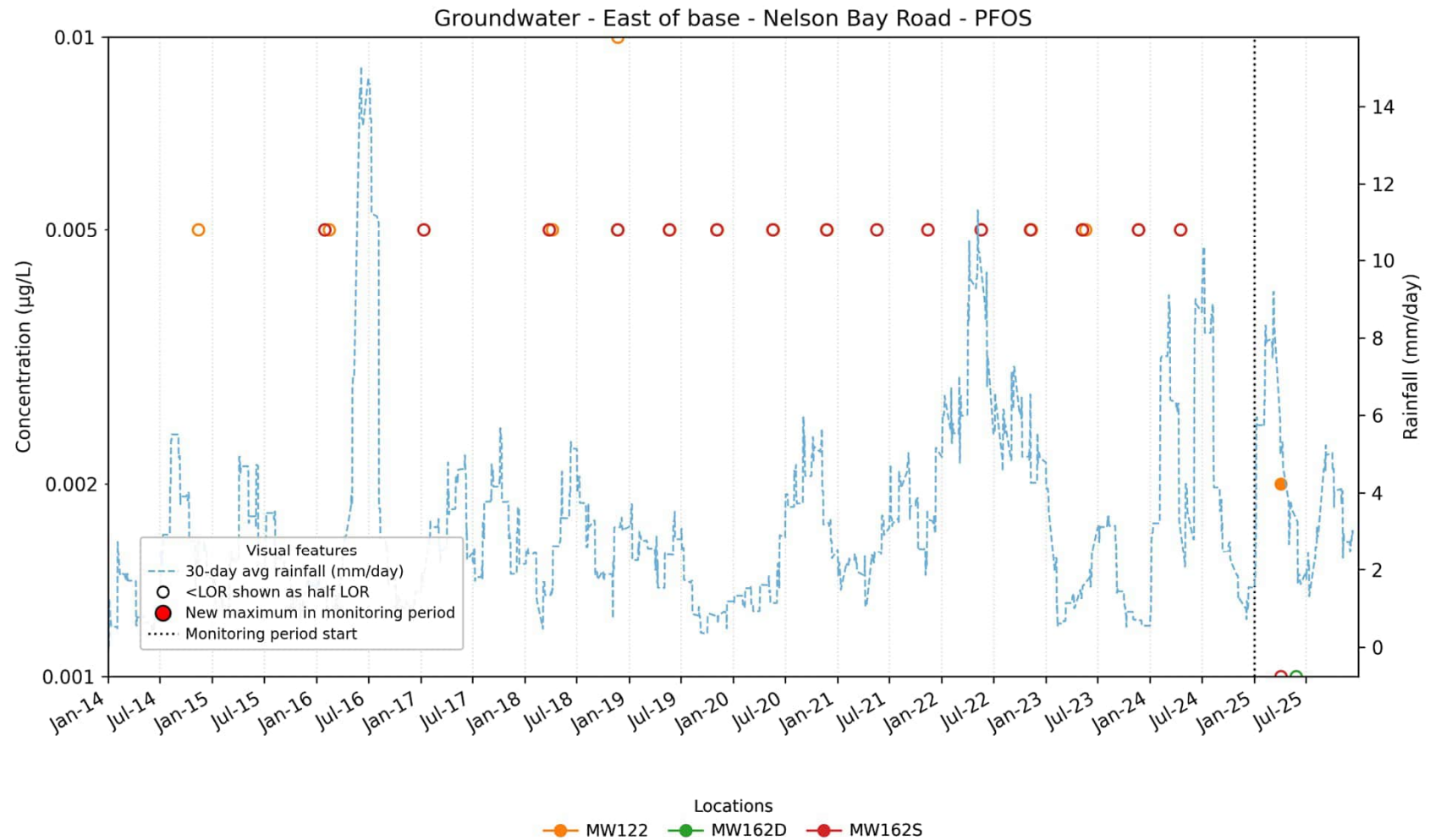
Graph G22 - Temporal Trend



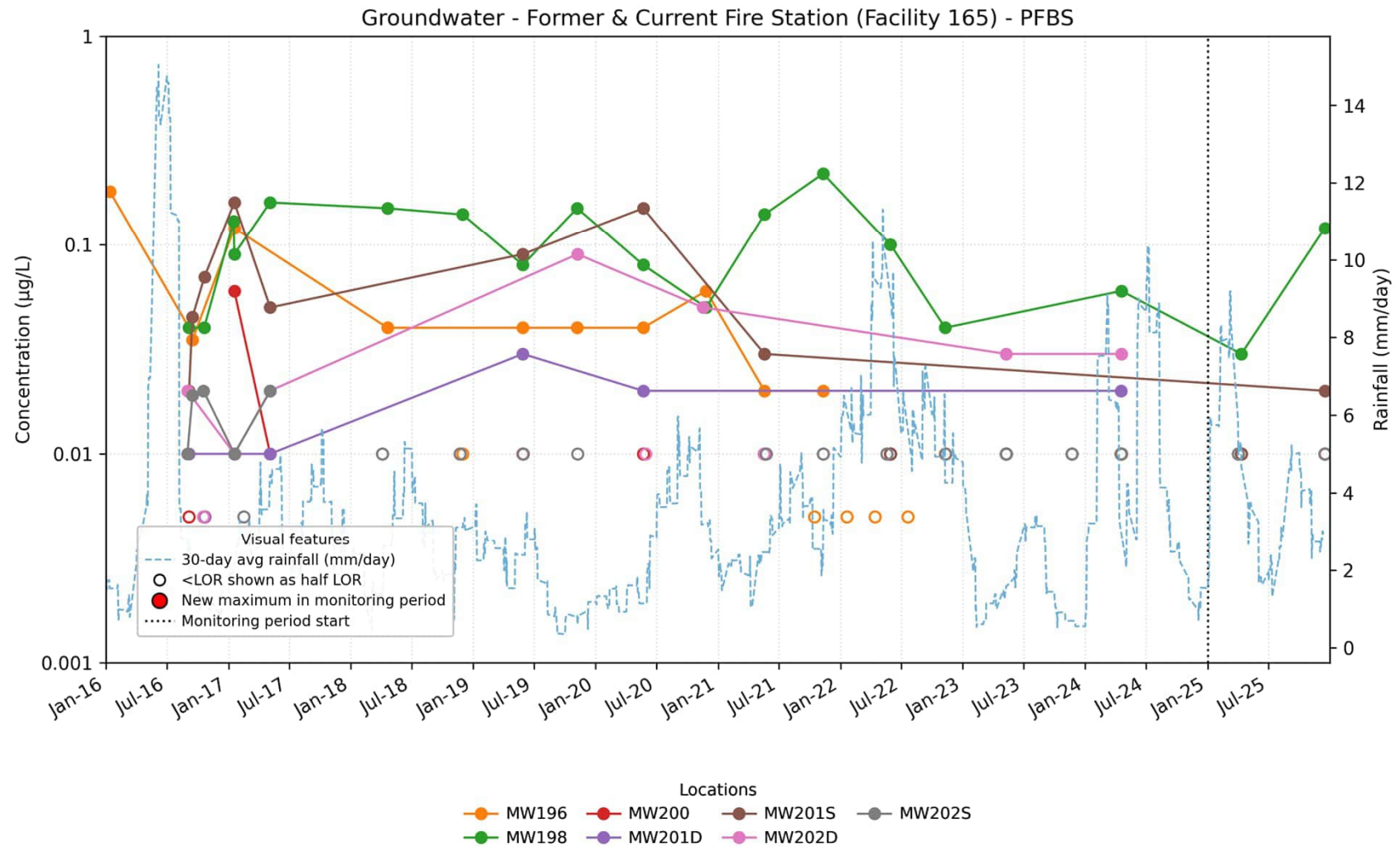
Graph G23 - Temporal Trend



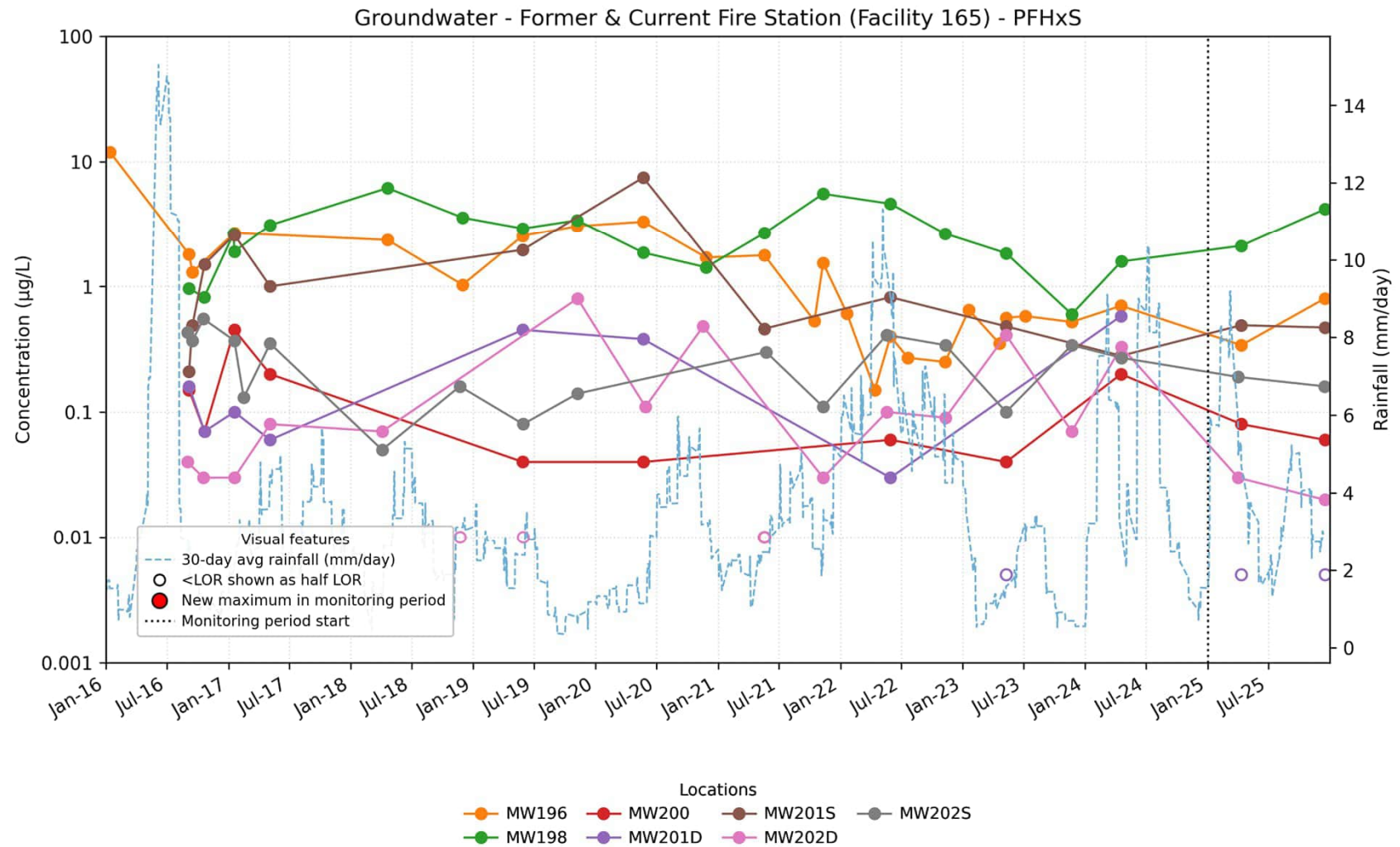
Graph G24 - Temporal Trend



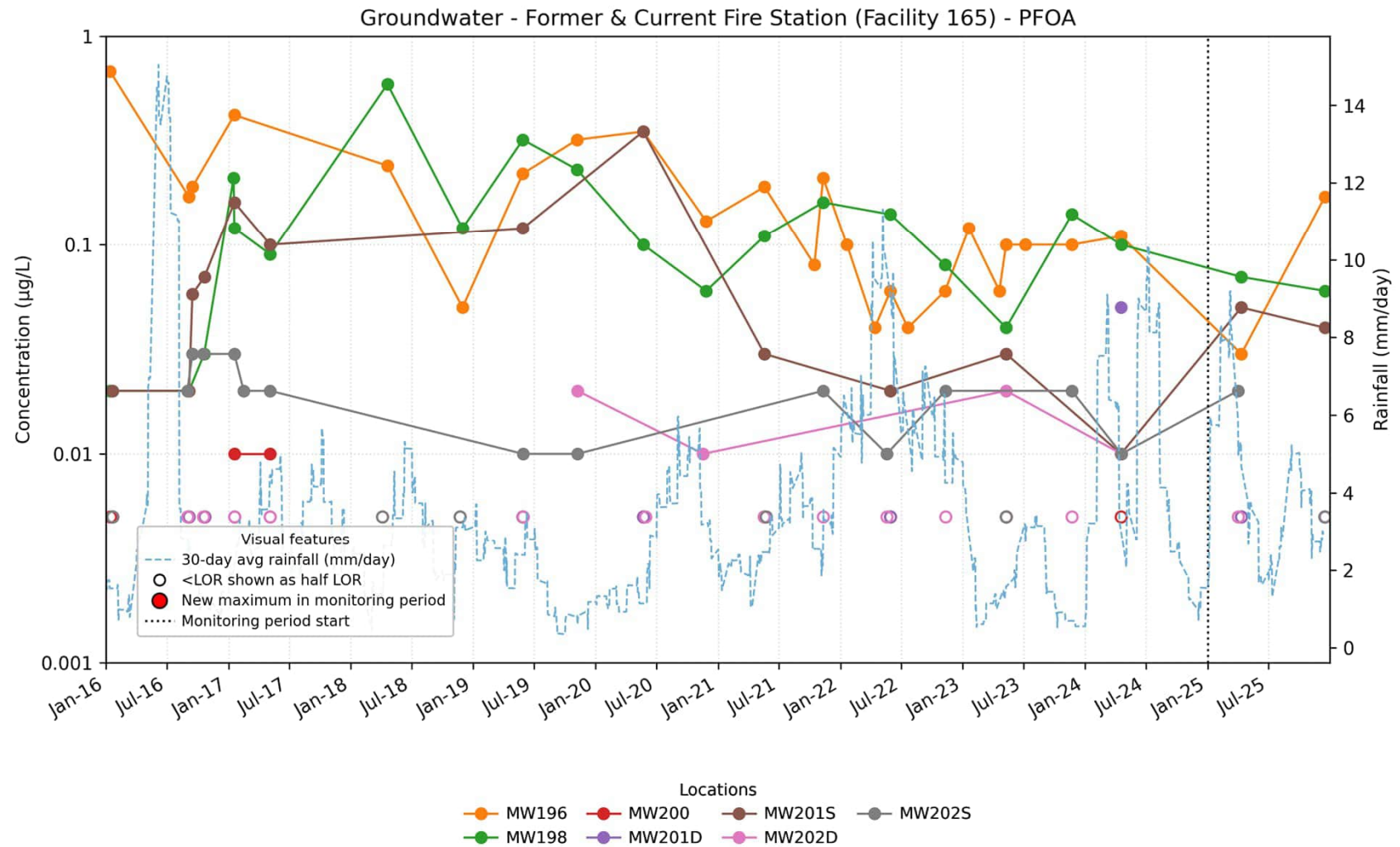
Graph G25 - Temporal Trend



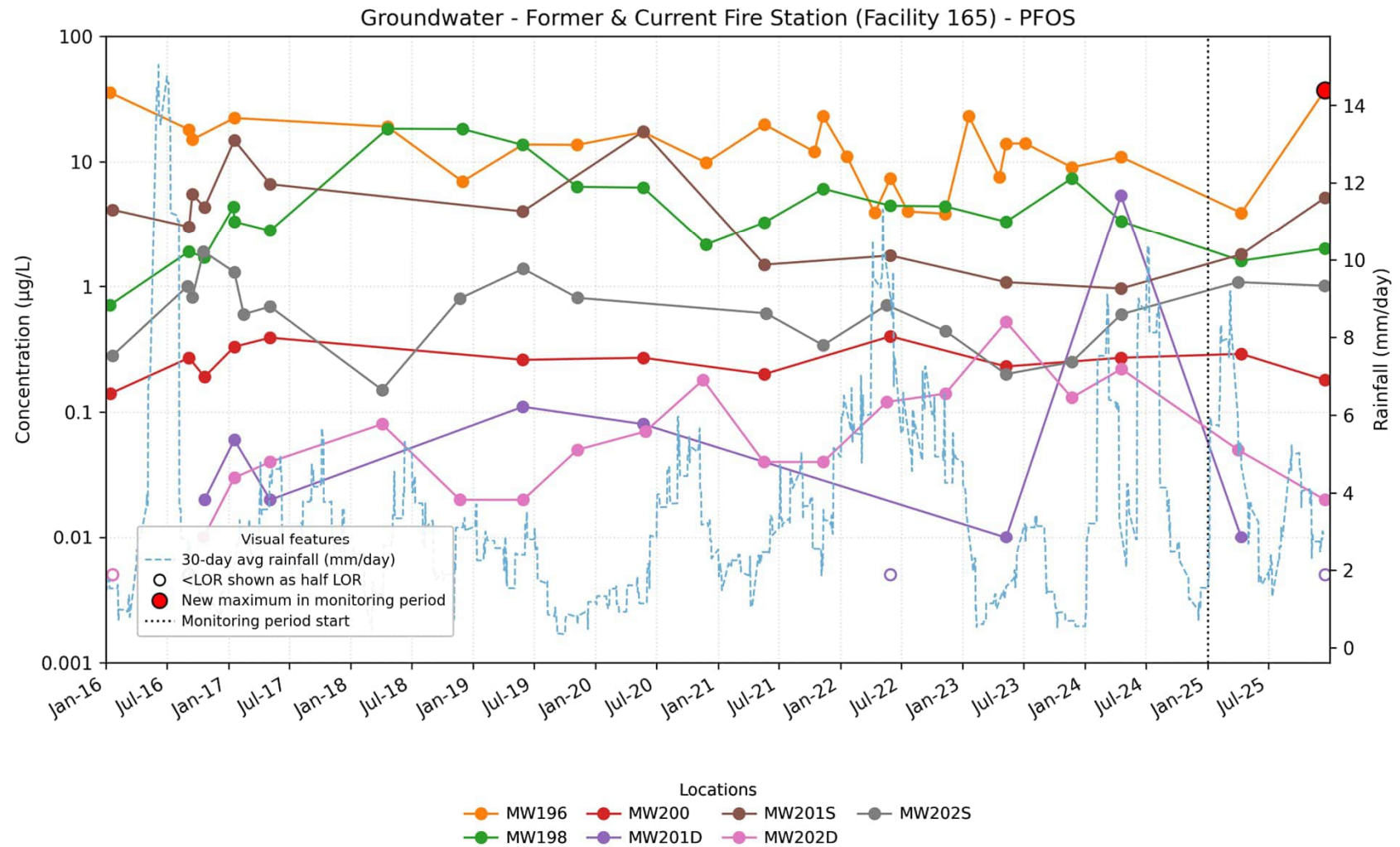
Graph G26 - Temporal Trend



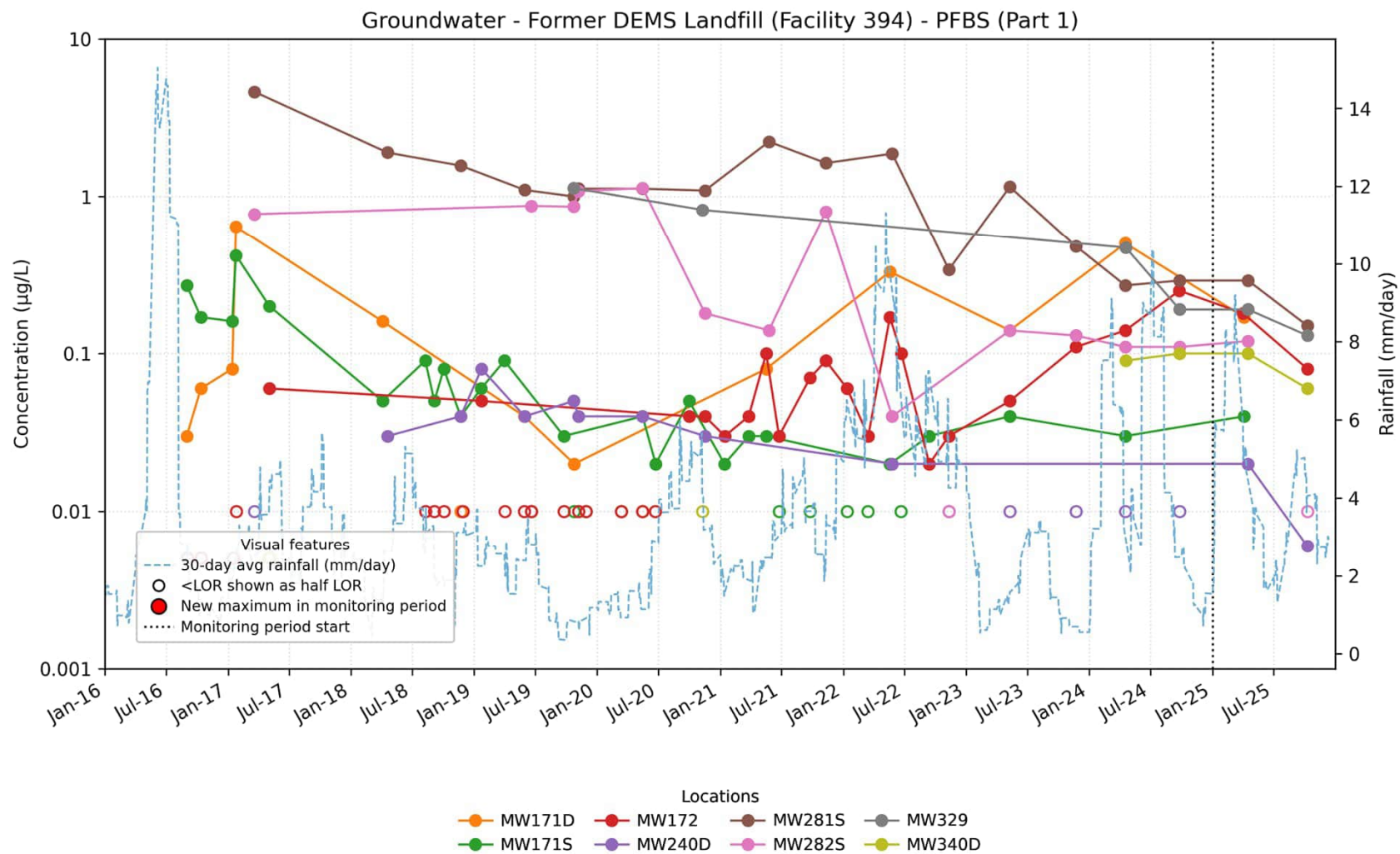
Graph G27 - Temporal Trend



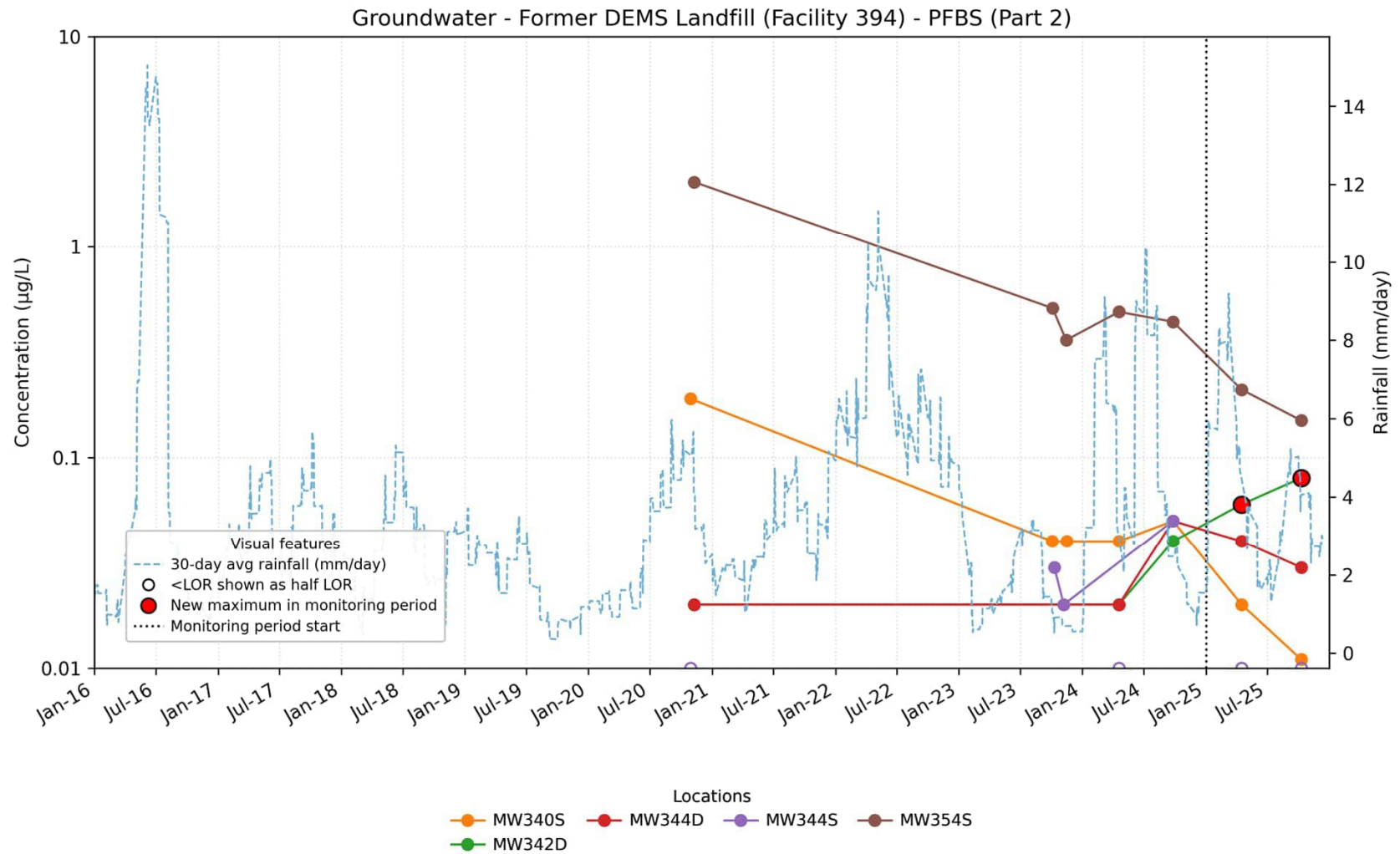
Graph G28 - Temporal Trend



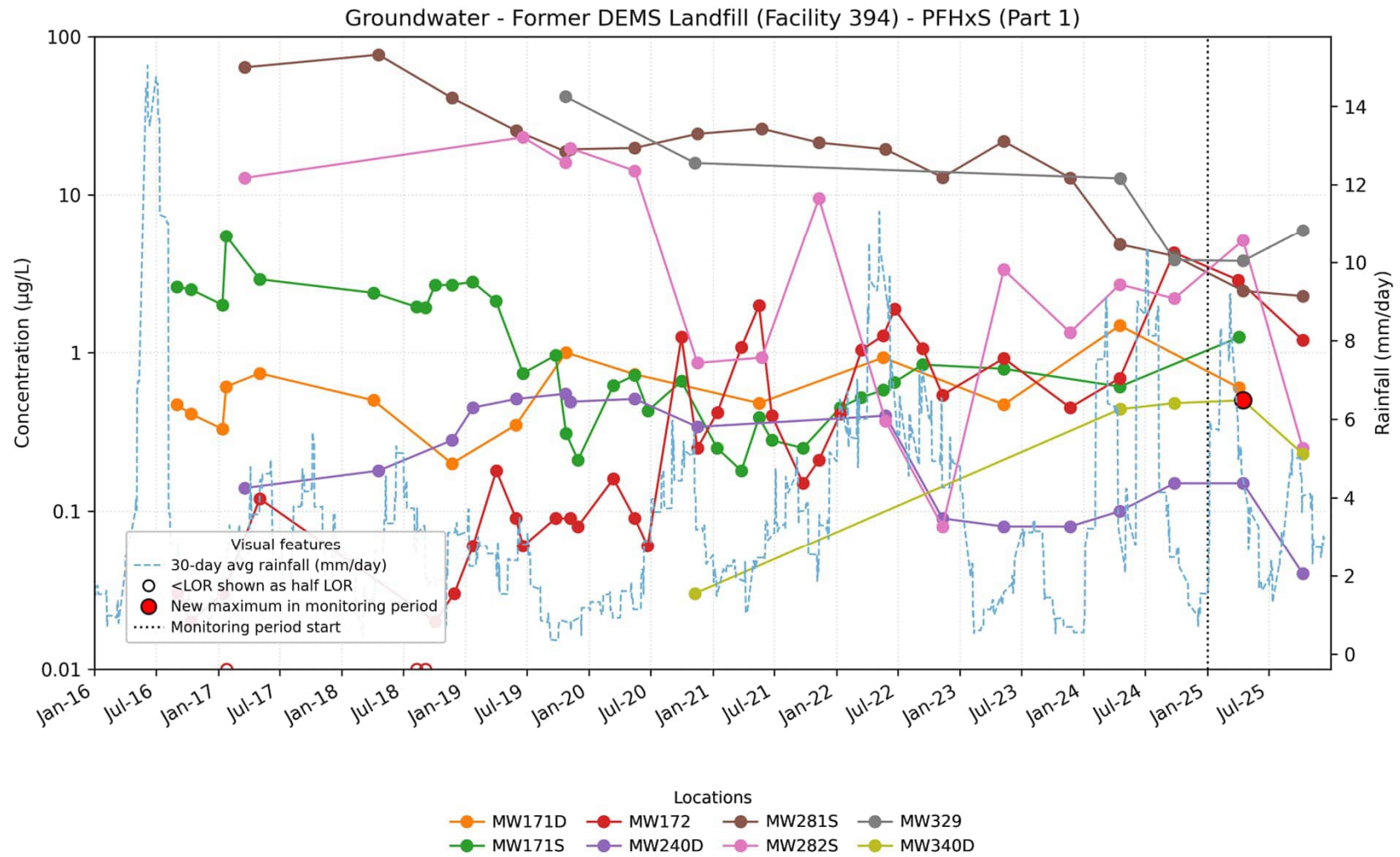
Graph G29 - Temporal Trend



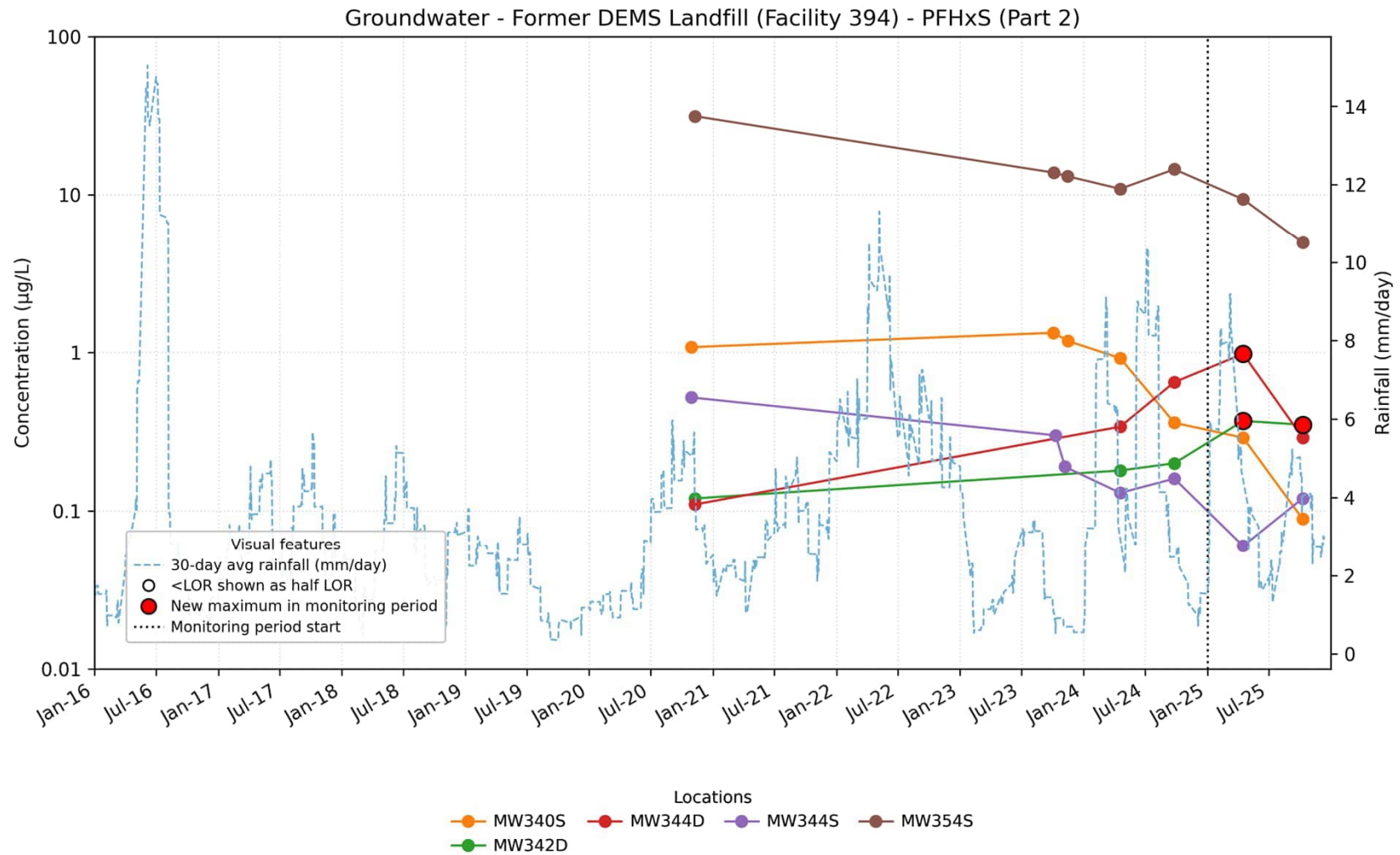
Graph G30 - Temporal Trend



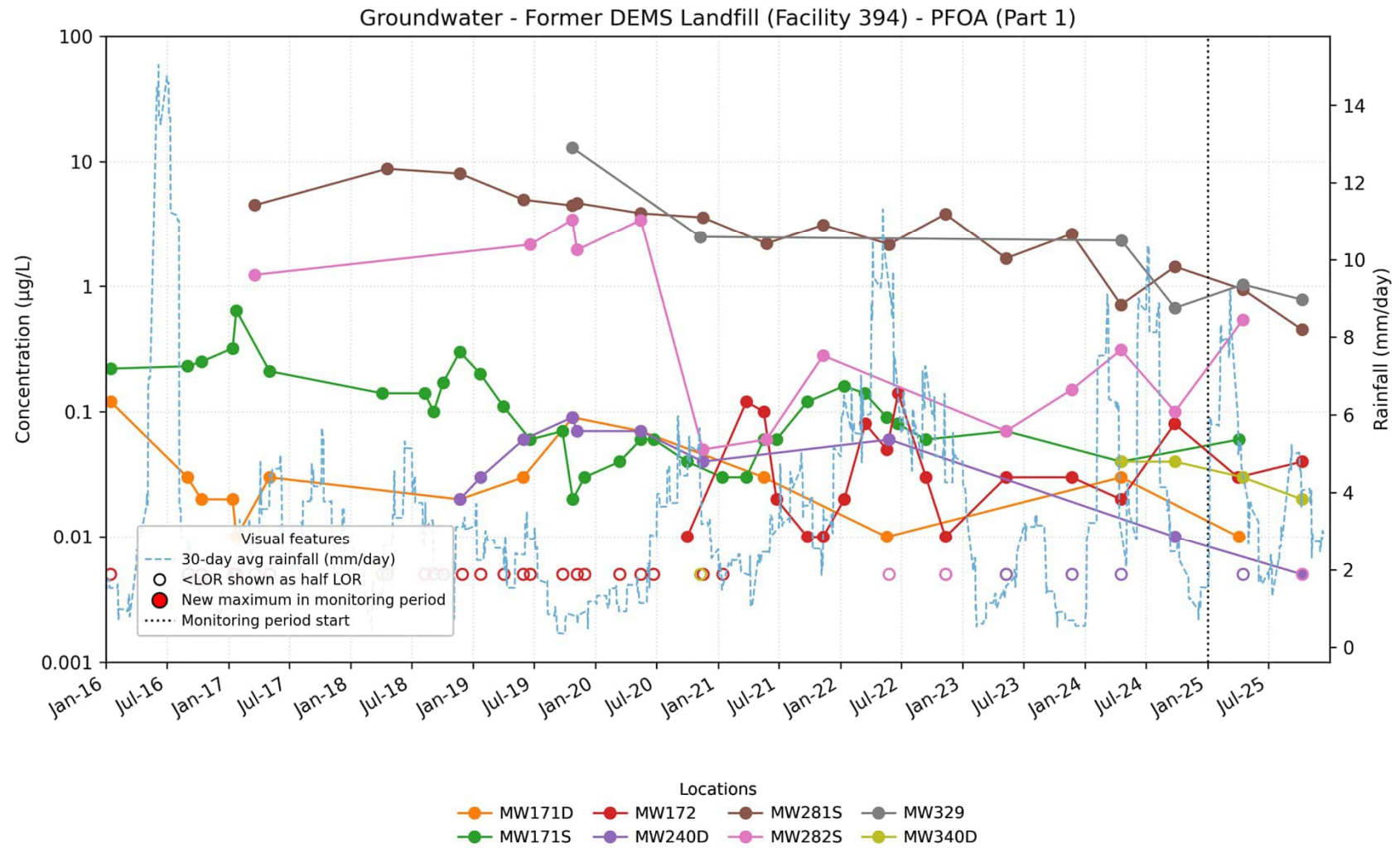
Graph G31 - Temporal Trend



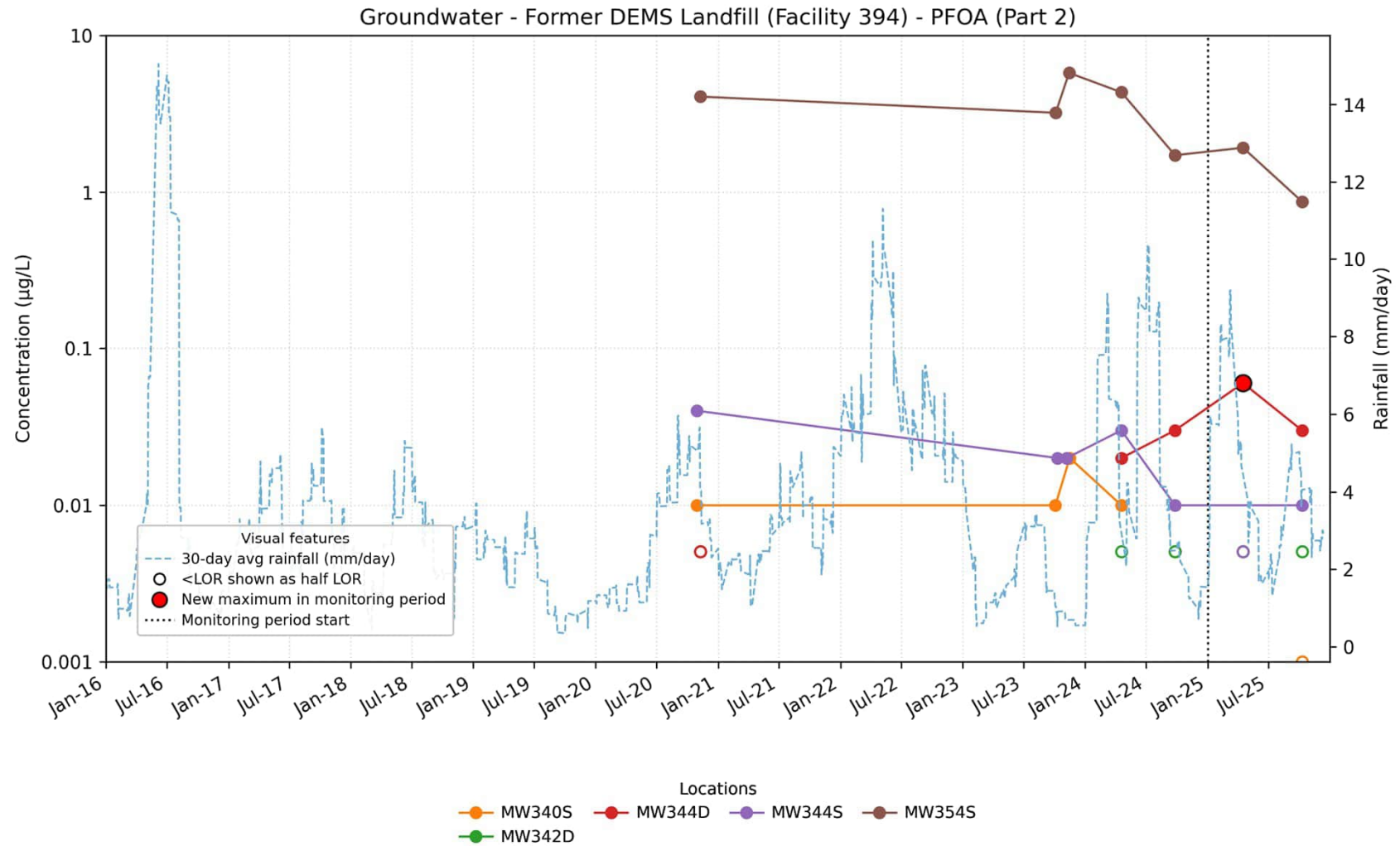
Graph G32 - Temporal Trend



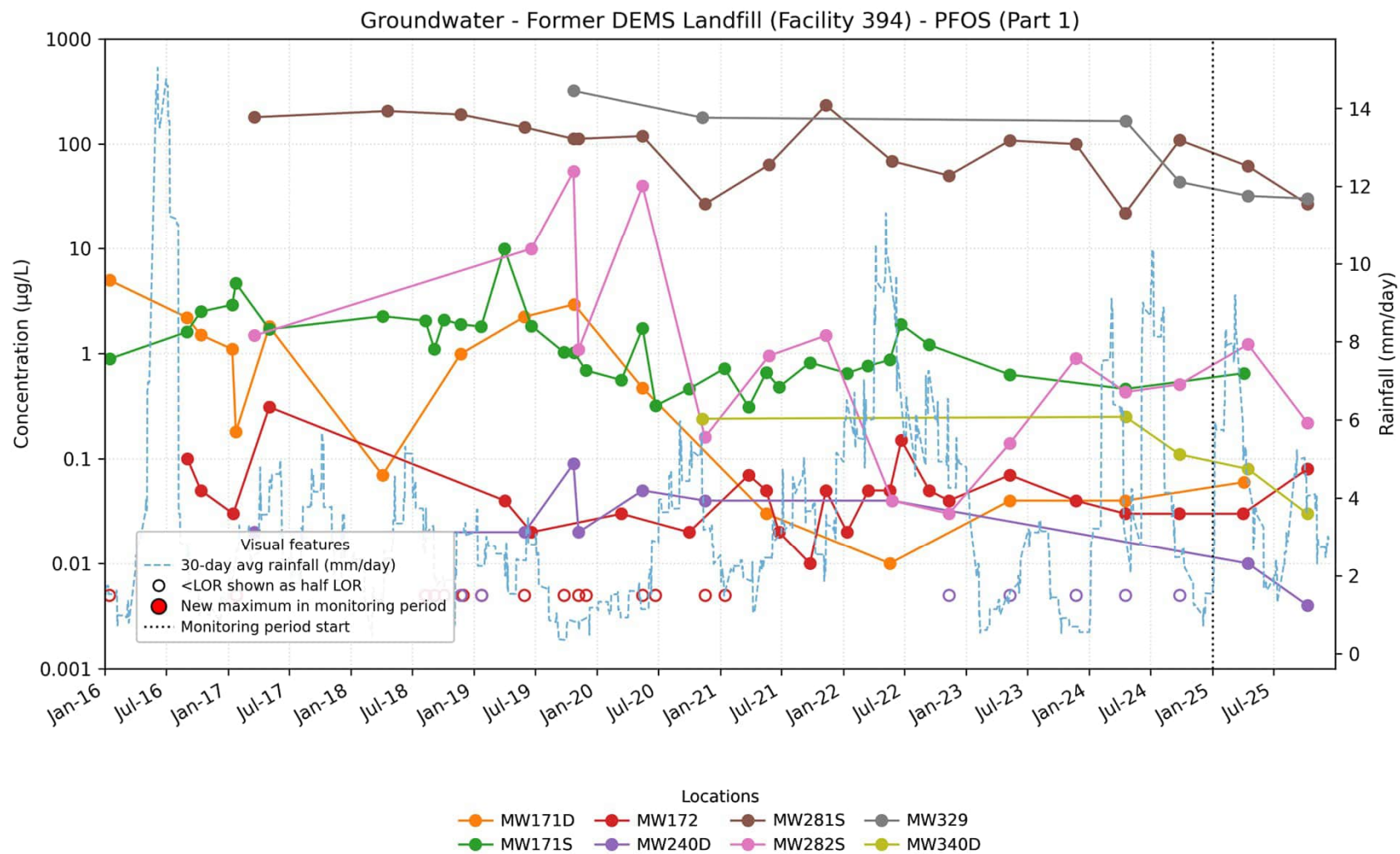
Graph G33 - Temporal Trend



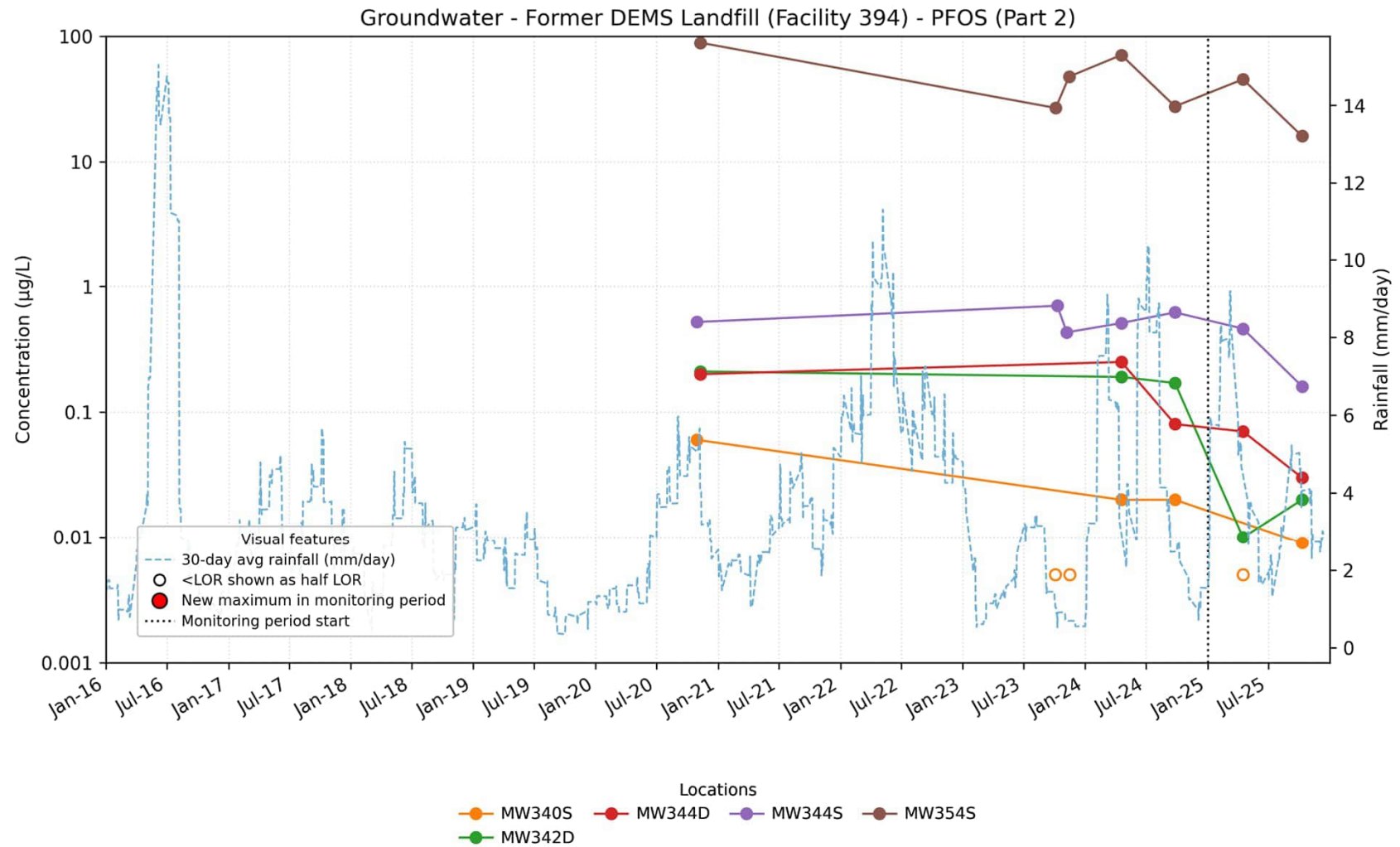
Graph G34 - Temporal Trend



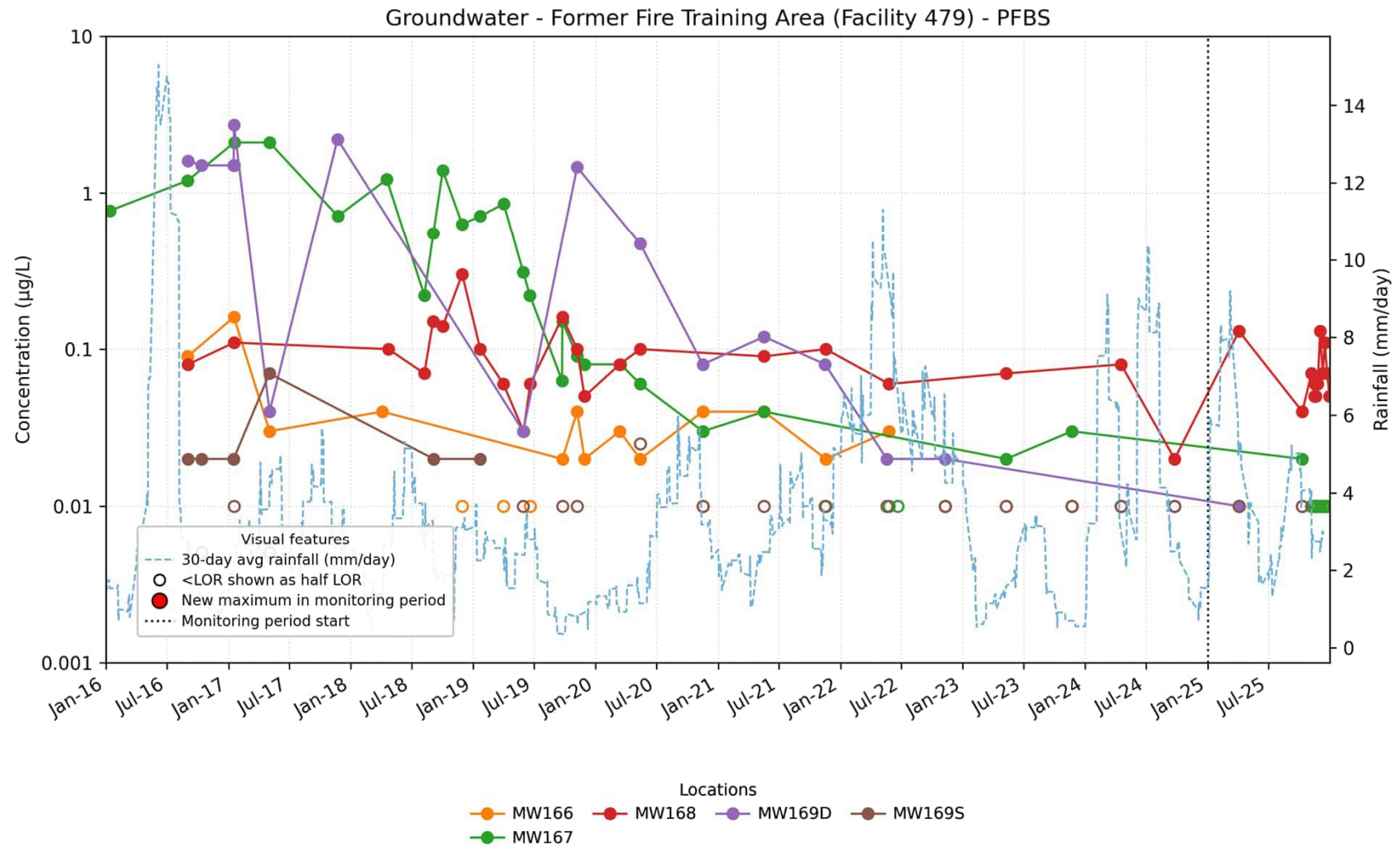
Graph G35 - Temporal Trend



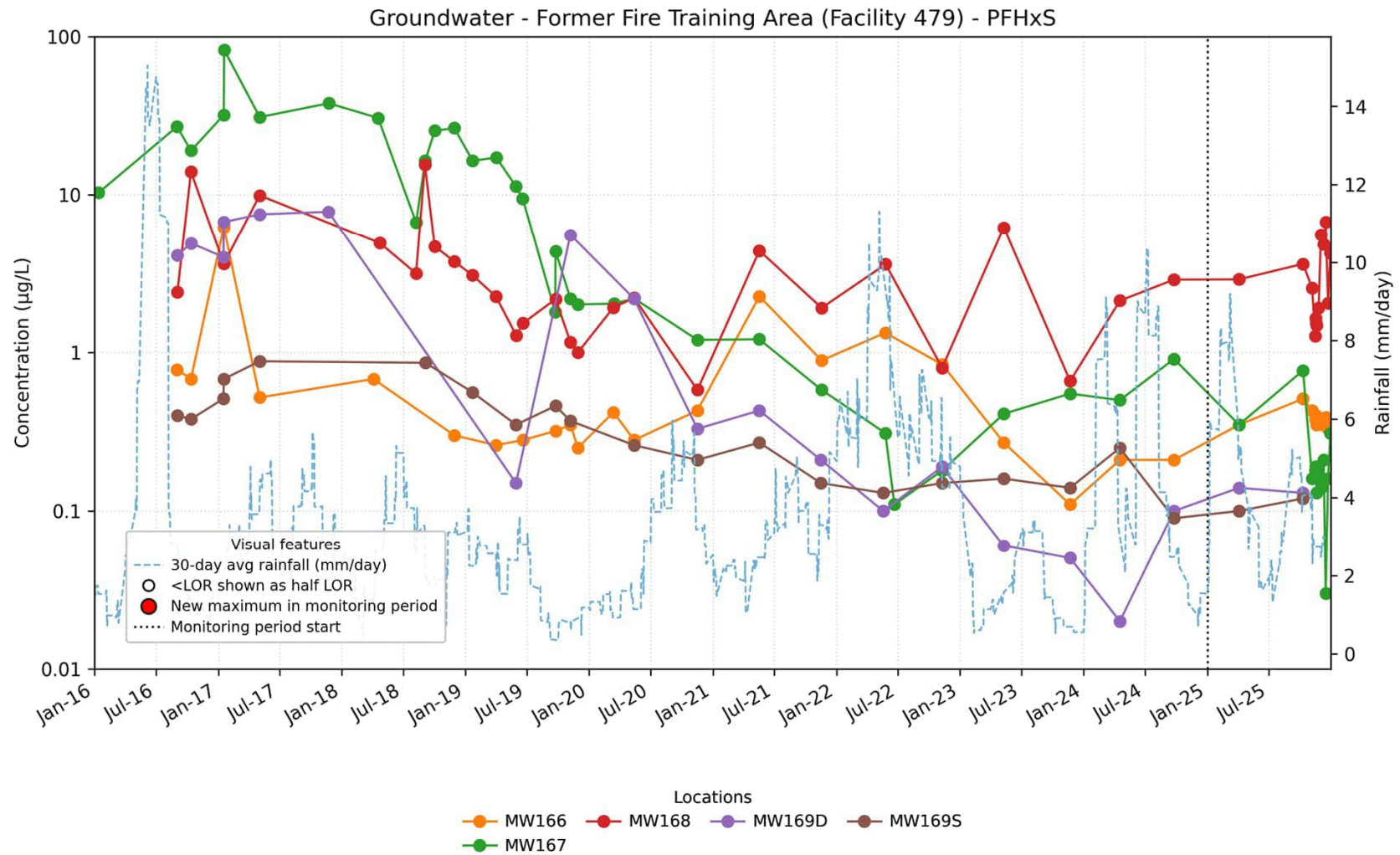
Graph G36 - Temporal Trend



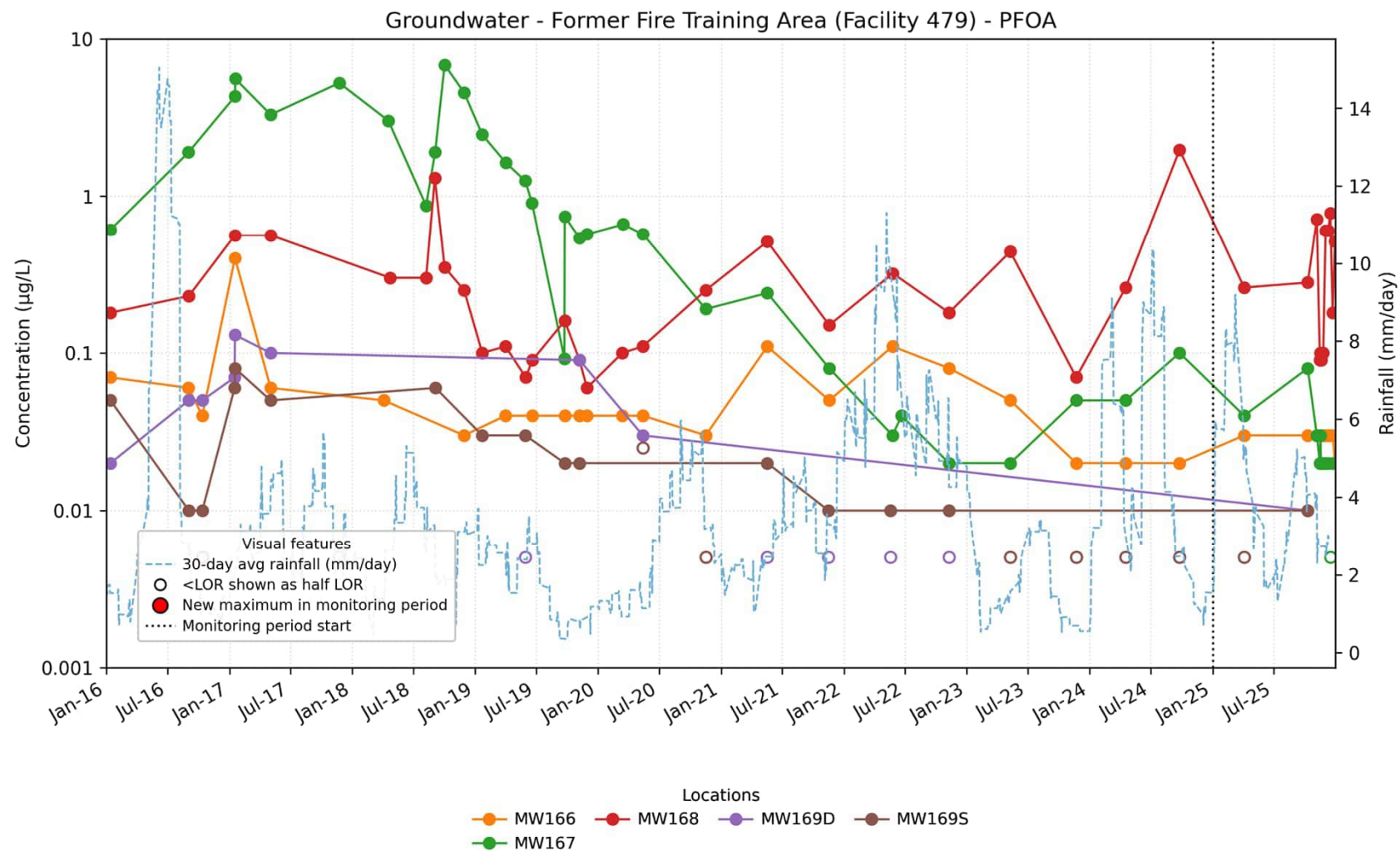
Graph G37 - Temporal Trend



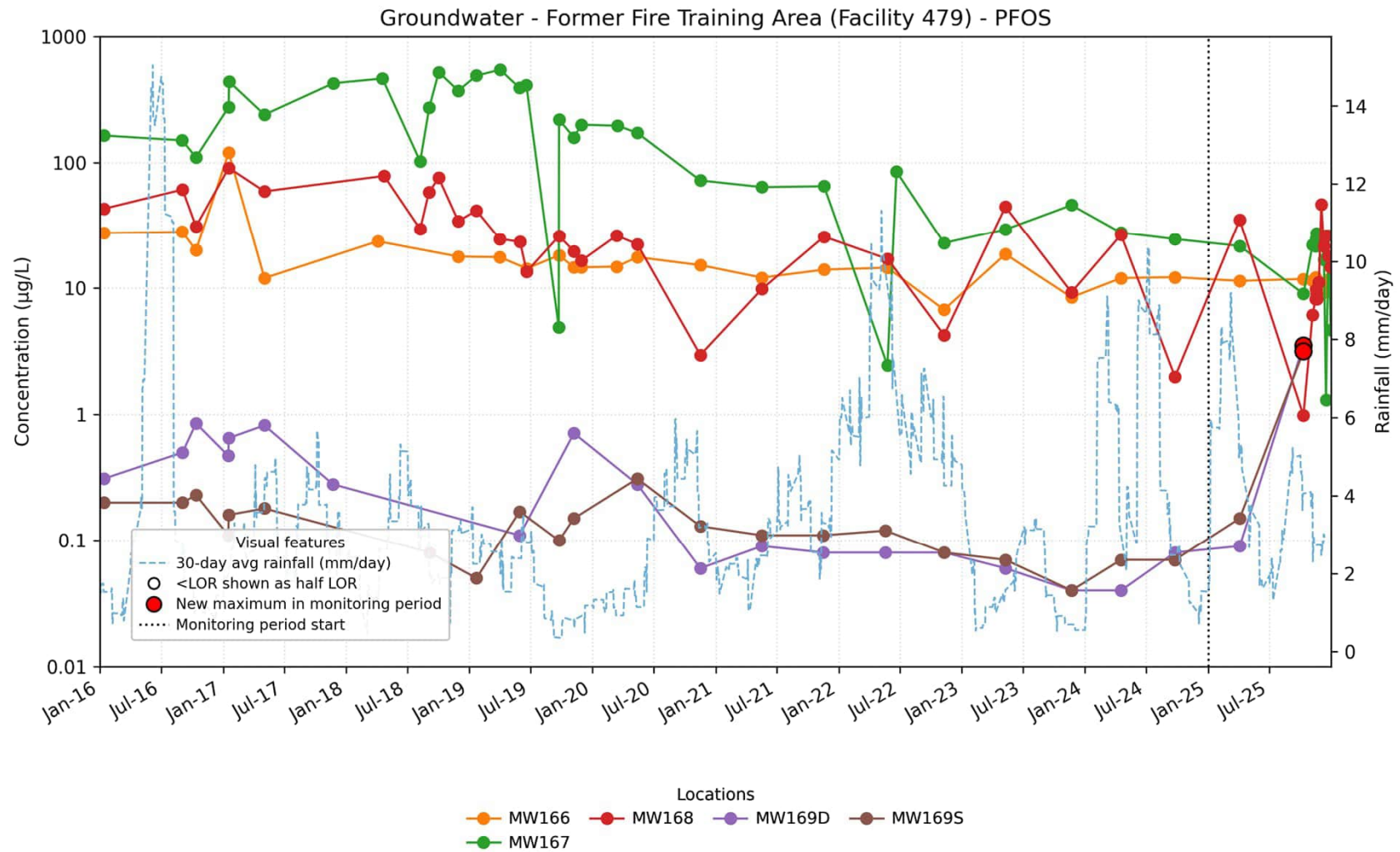
Graph G38 - Temporal Trend



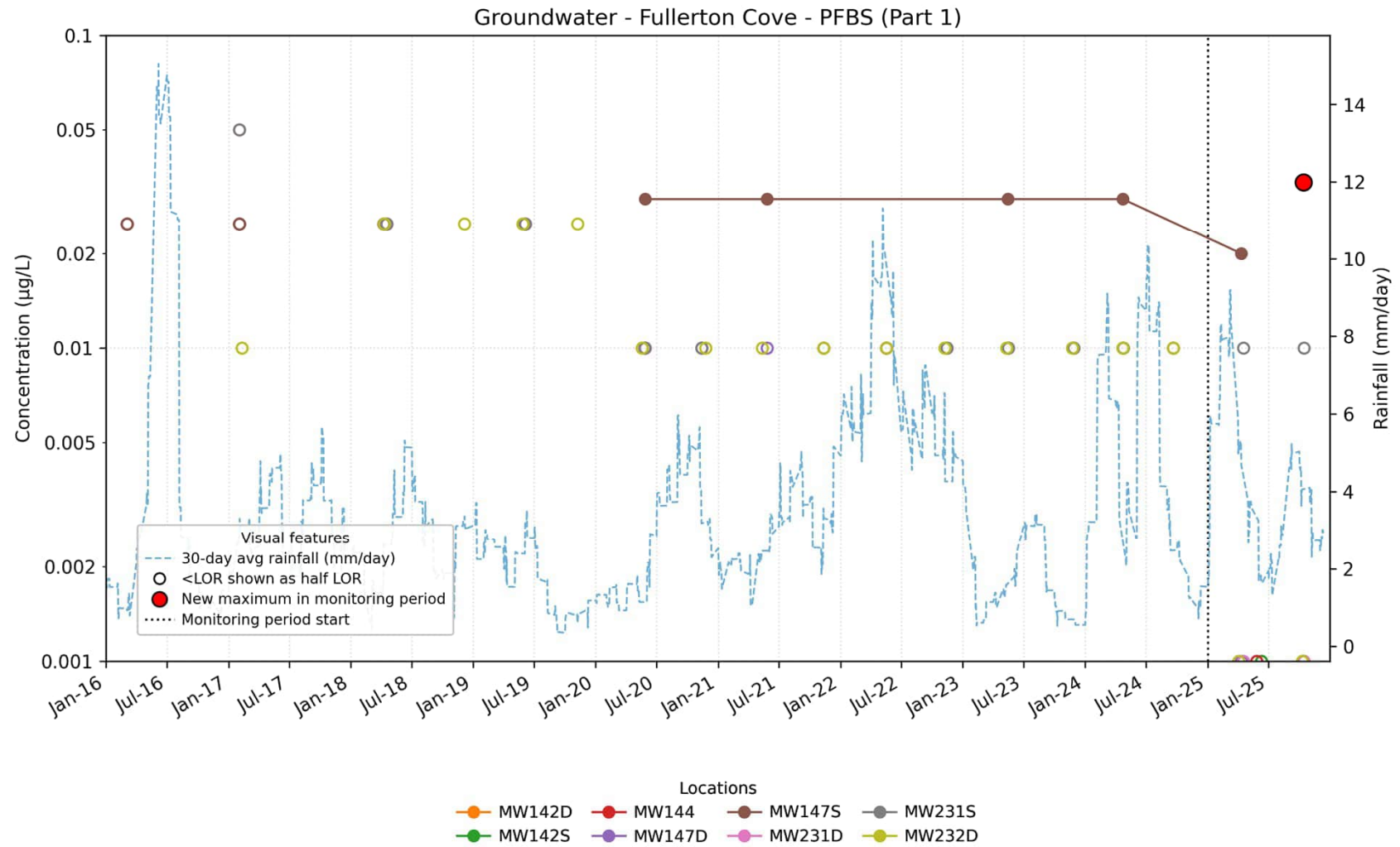
Graph G39 - Temporal Trend



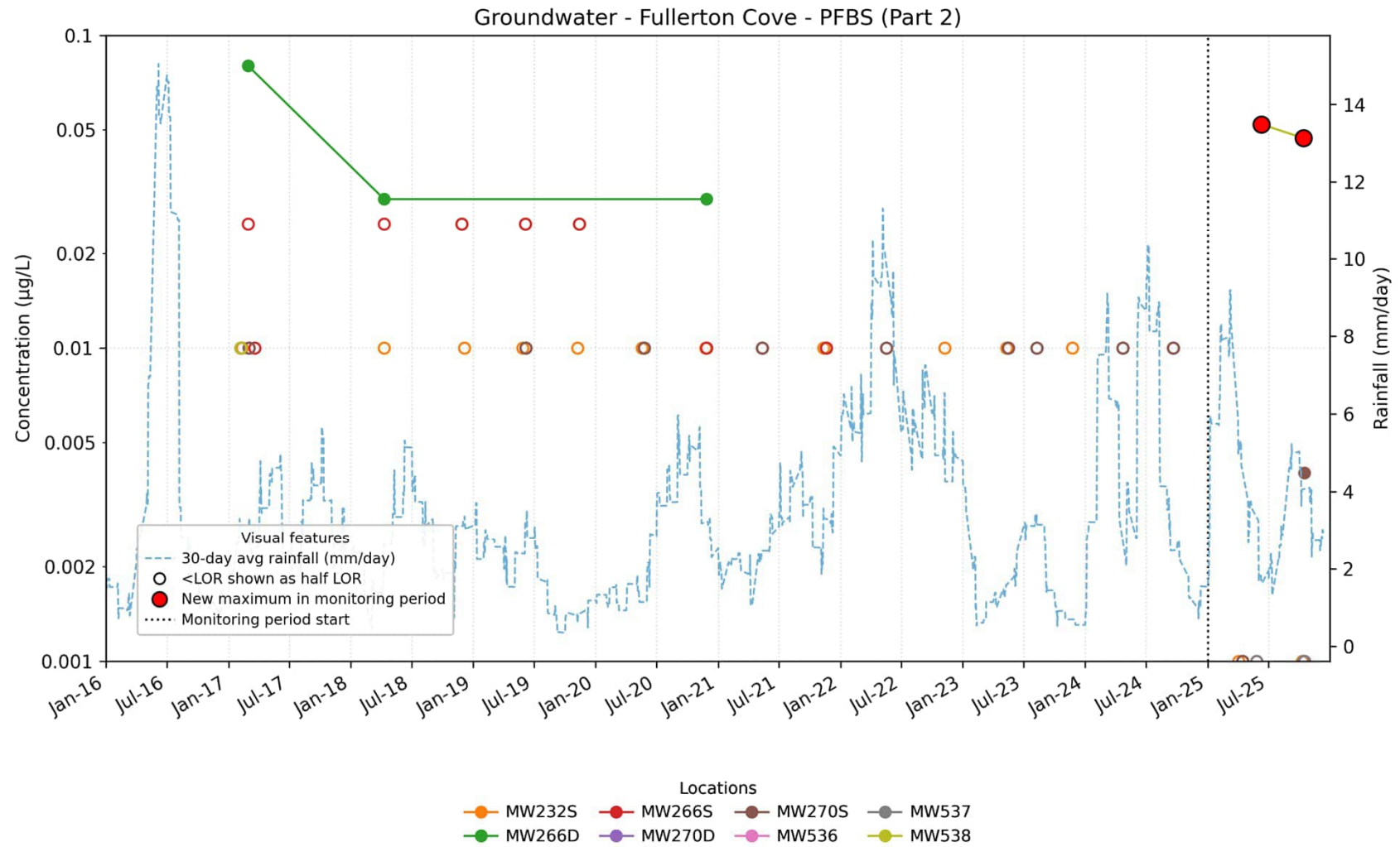
Graph G40 - Temporal Trend



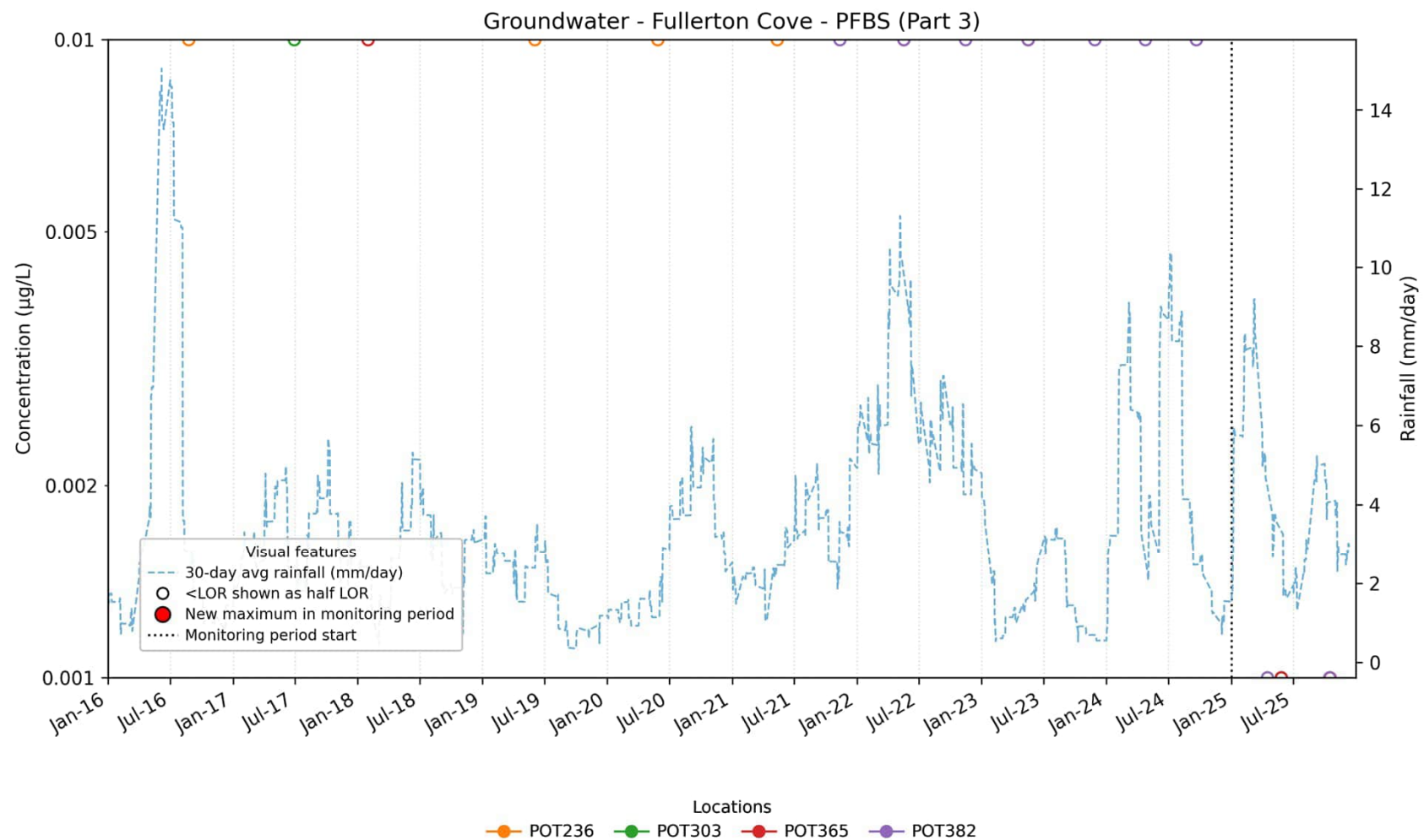
Graph G41 - Temporal Trend



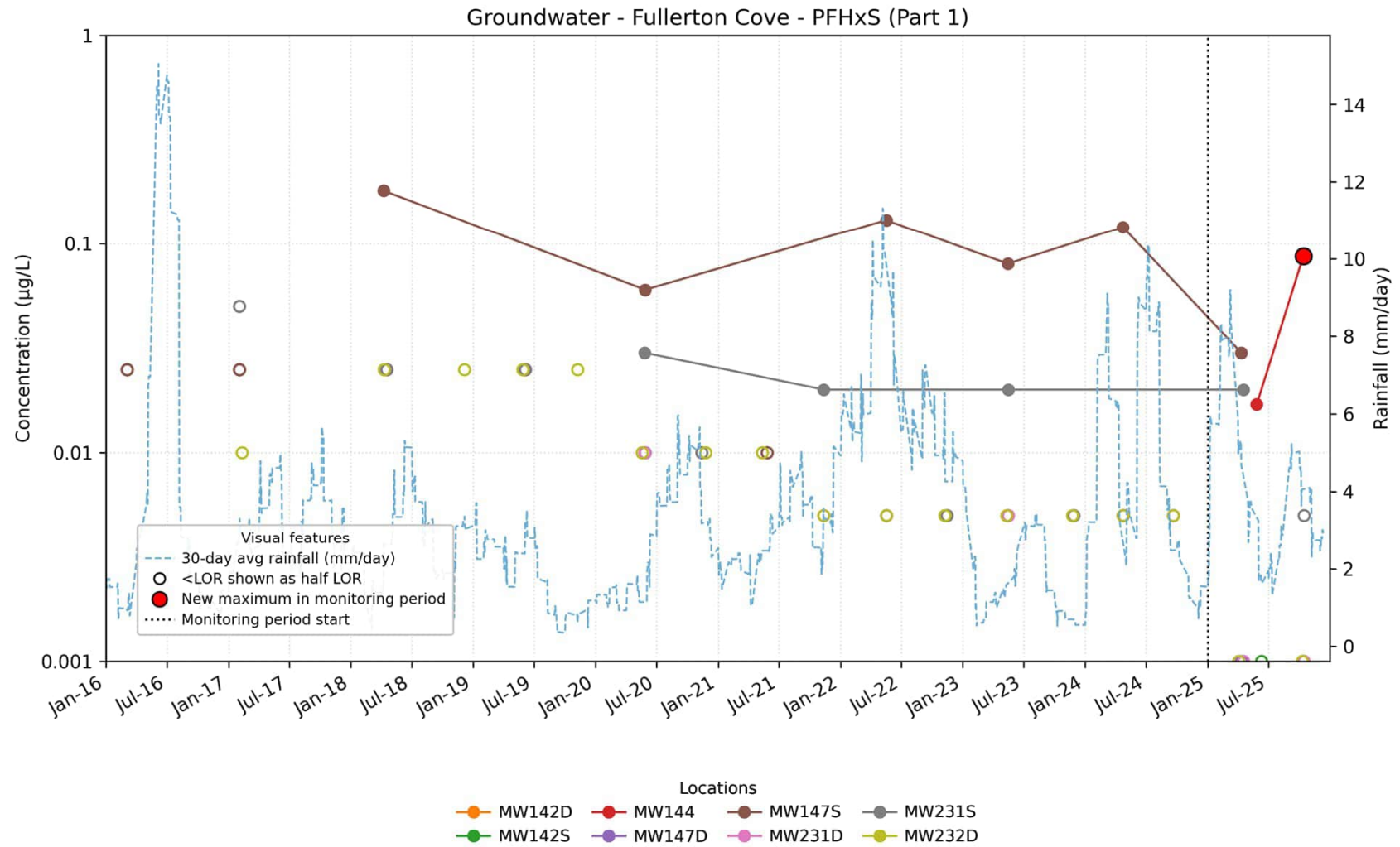
Graph G42 - Temporal Trend



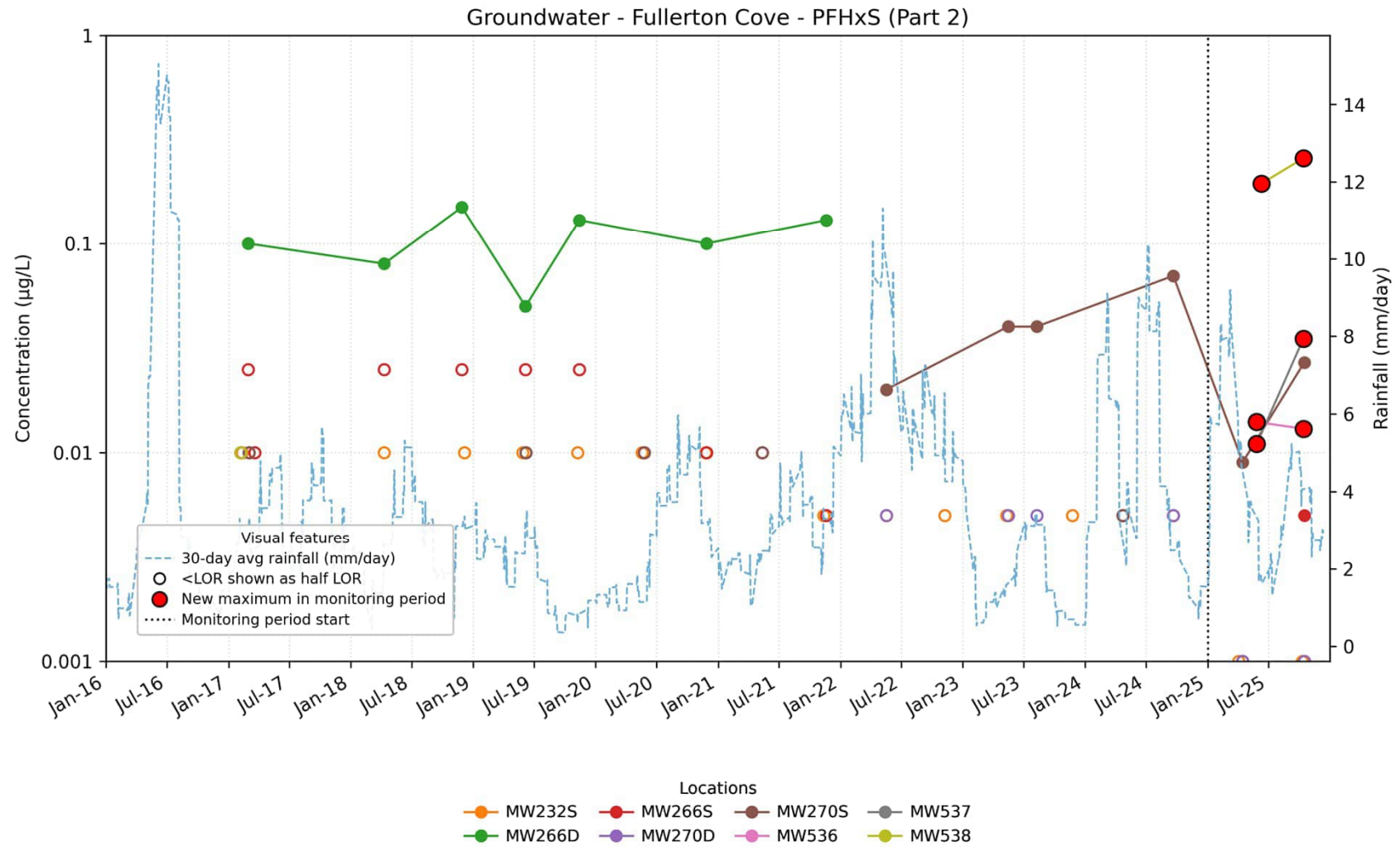
Graph G43 - Temporal Trend



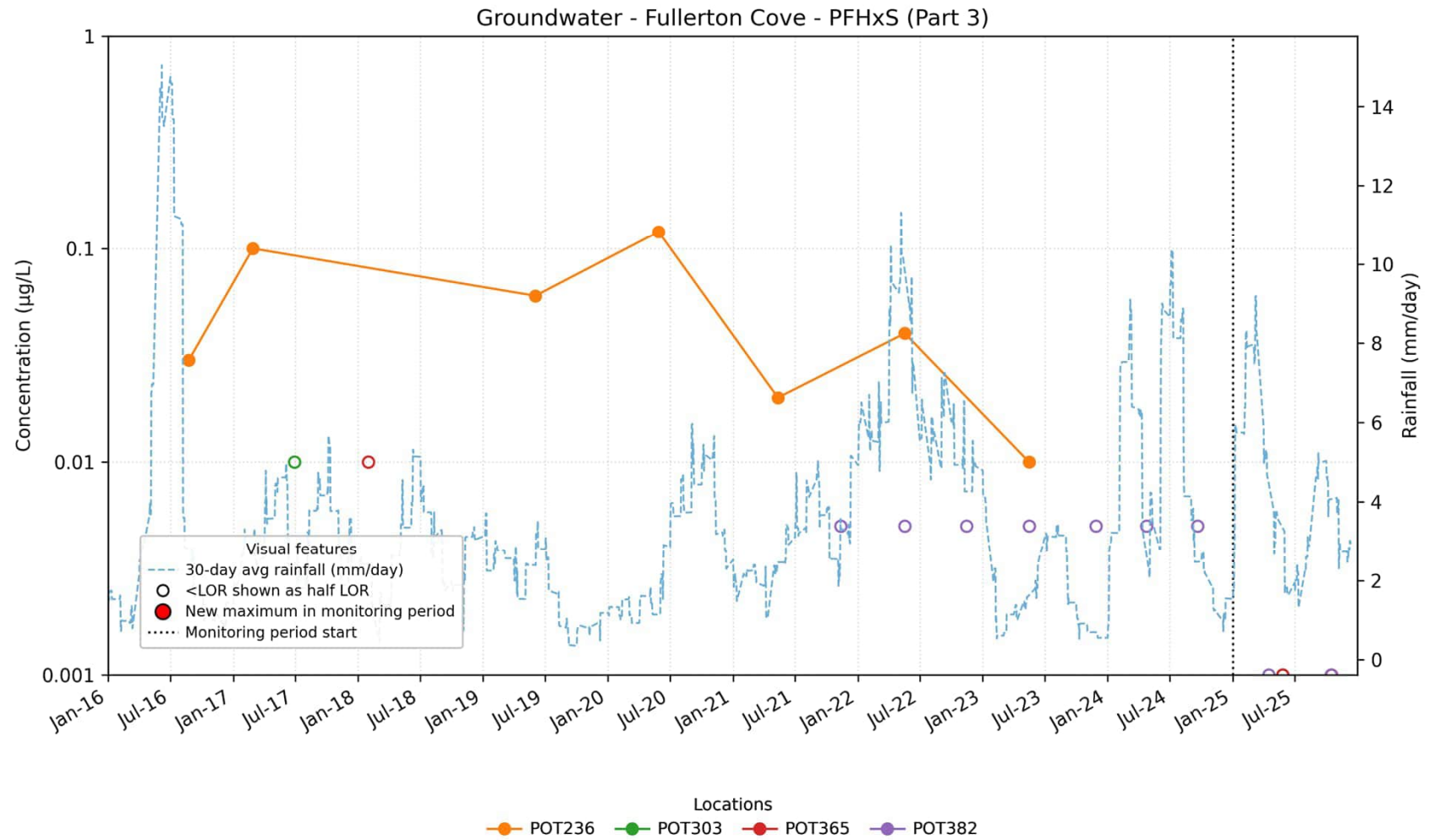
Graph G44 - Temporal Trend



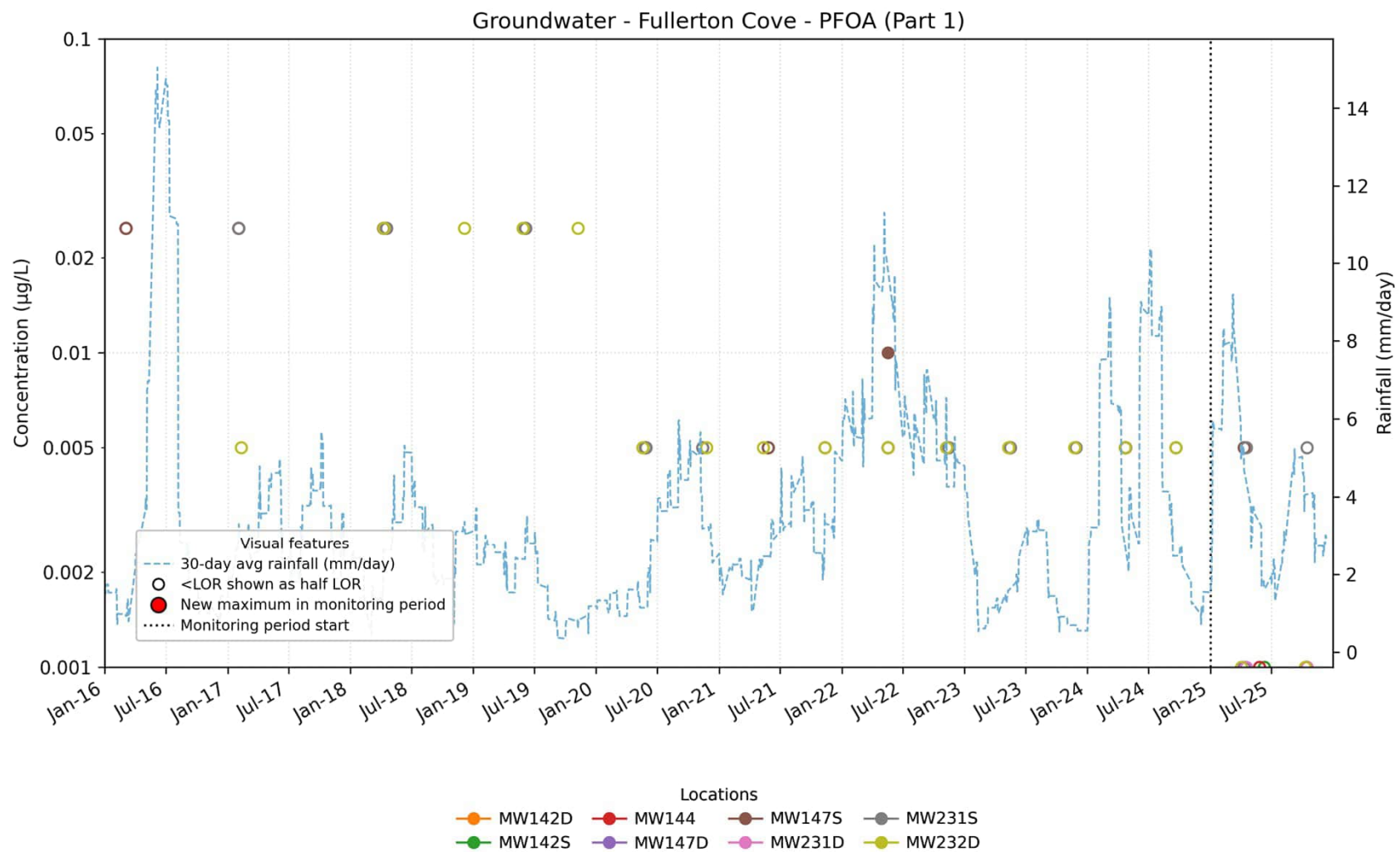
Graph G45 - Temporal Trend



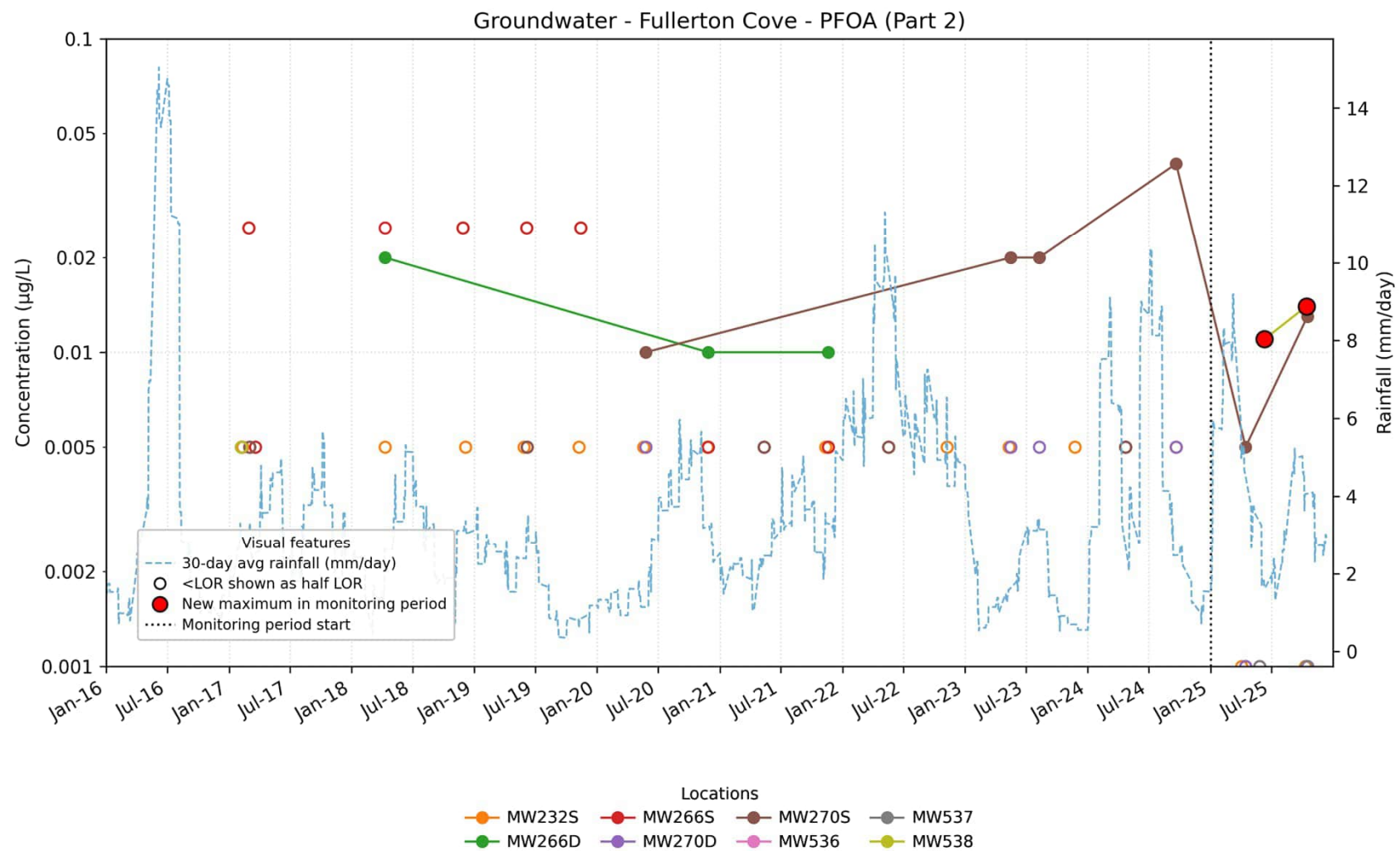
Graph G46 - Temporal Trend



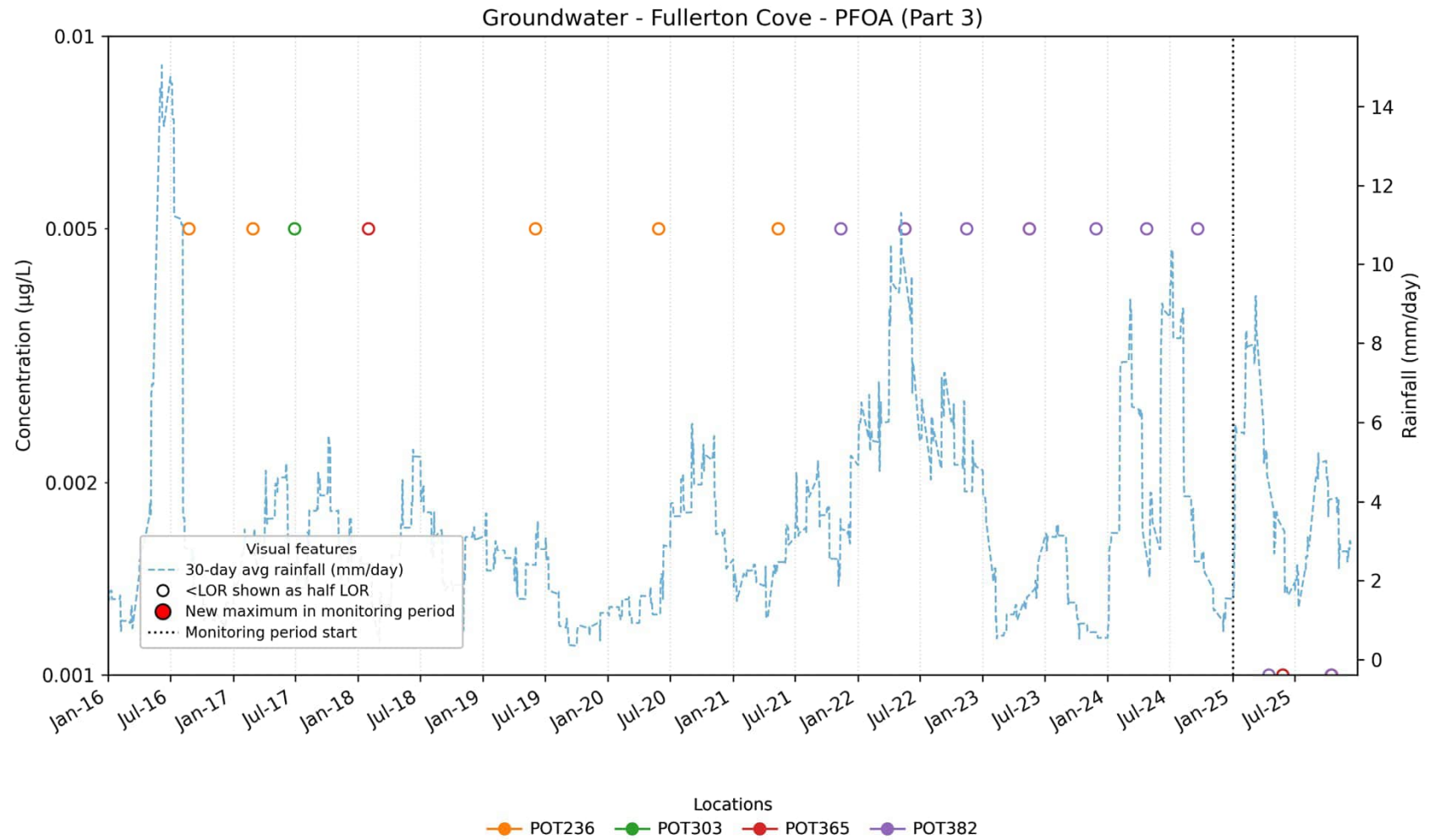
Graph G47 - Temporal Trend



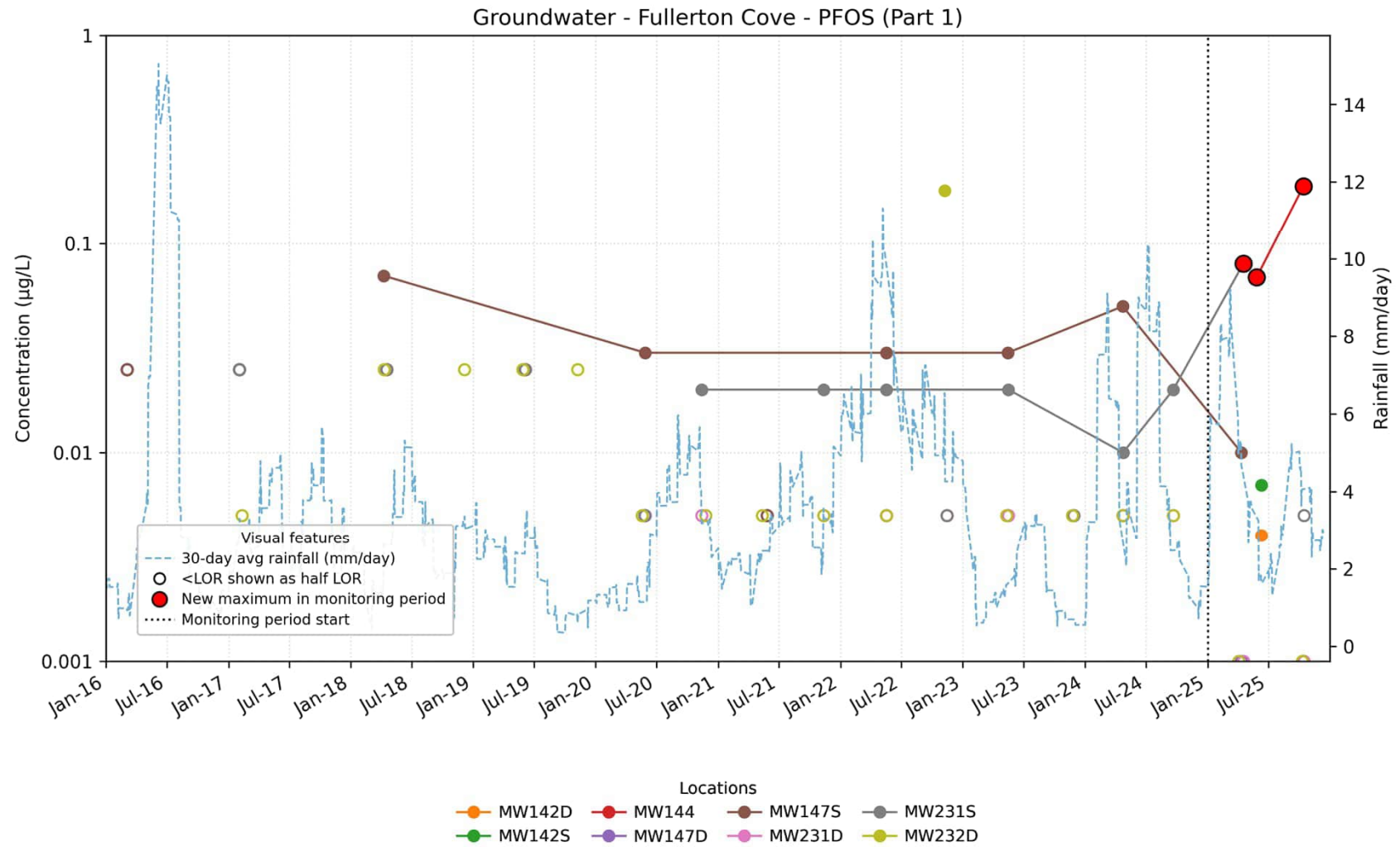
Graph G48 - Temporal Trend



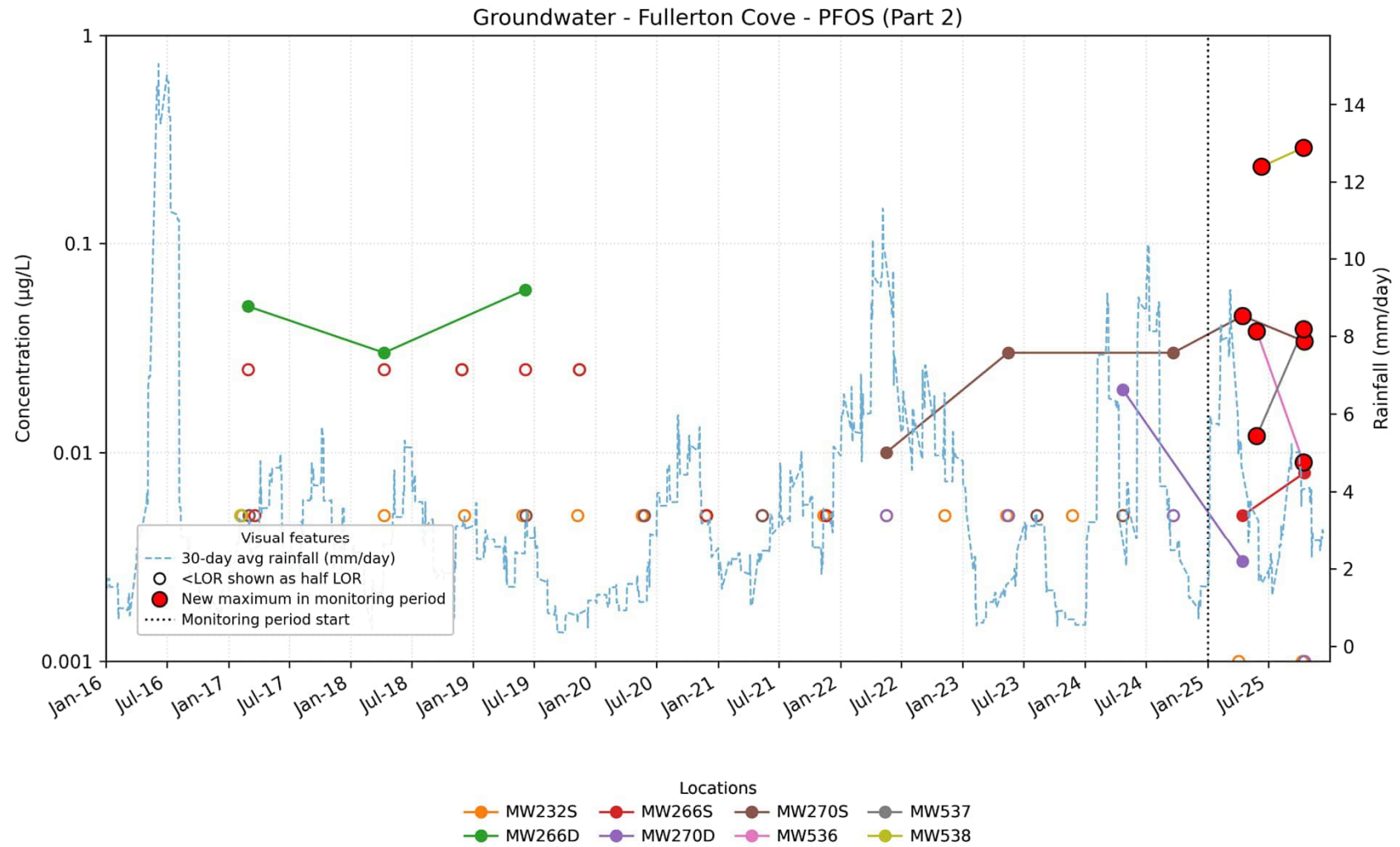
Graph G49 - Temporal Trend



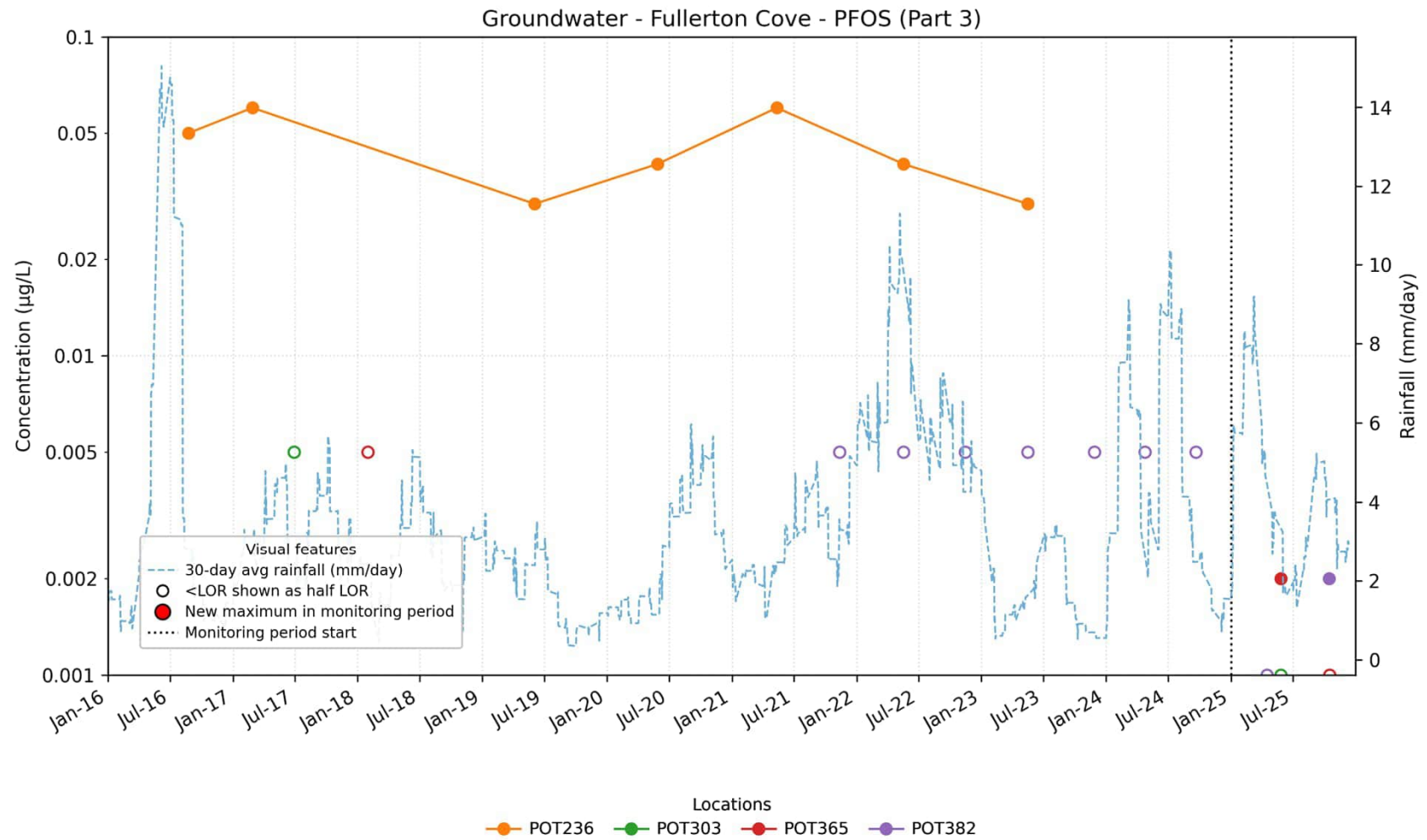
Graph G50 - Temporal Trend



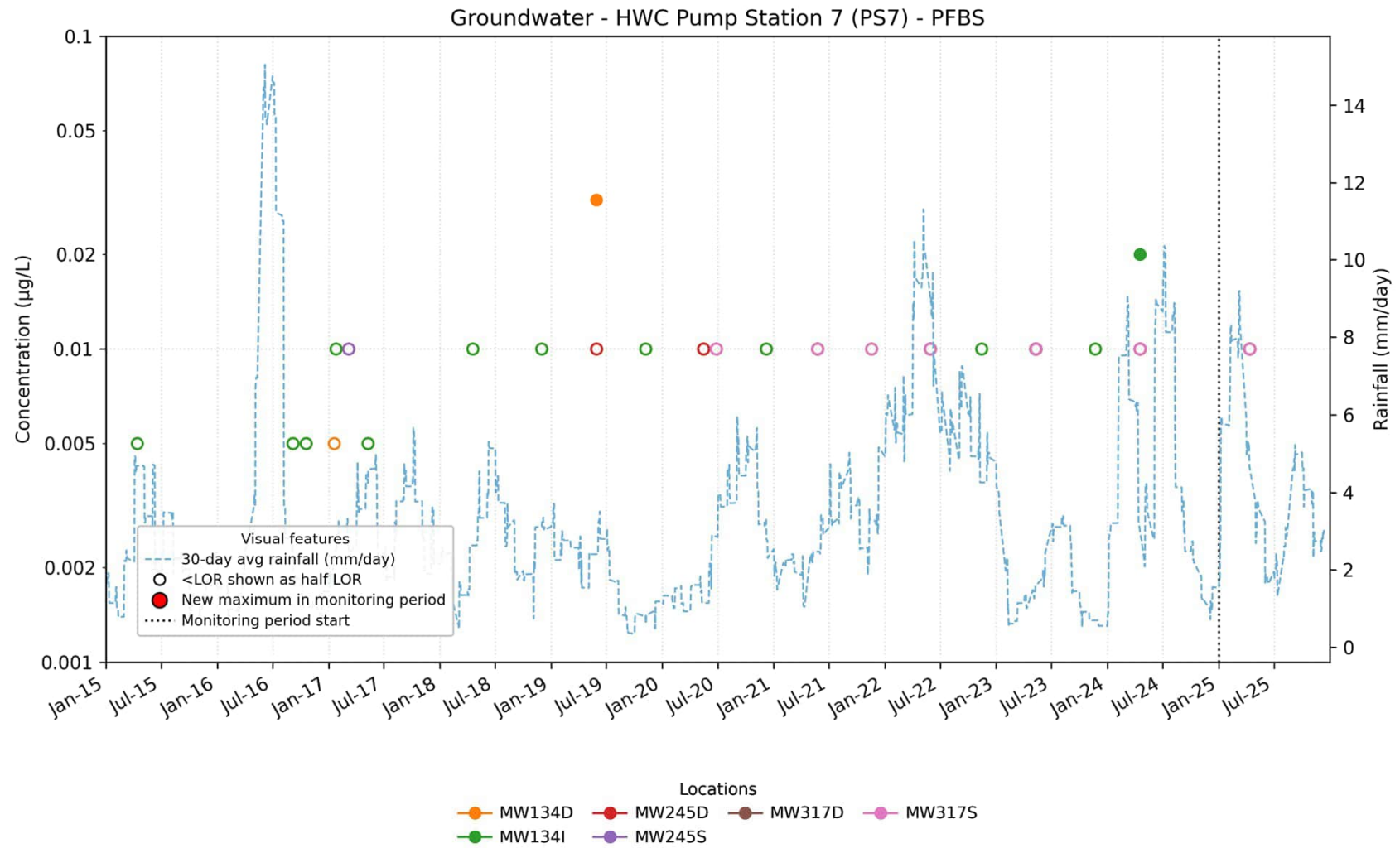
Graph G51 - Temporal Trend



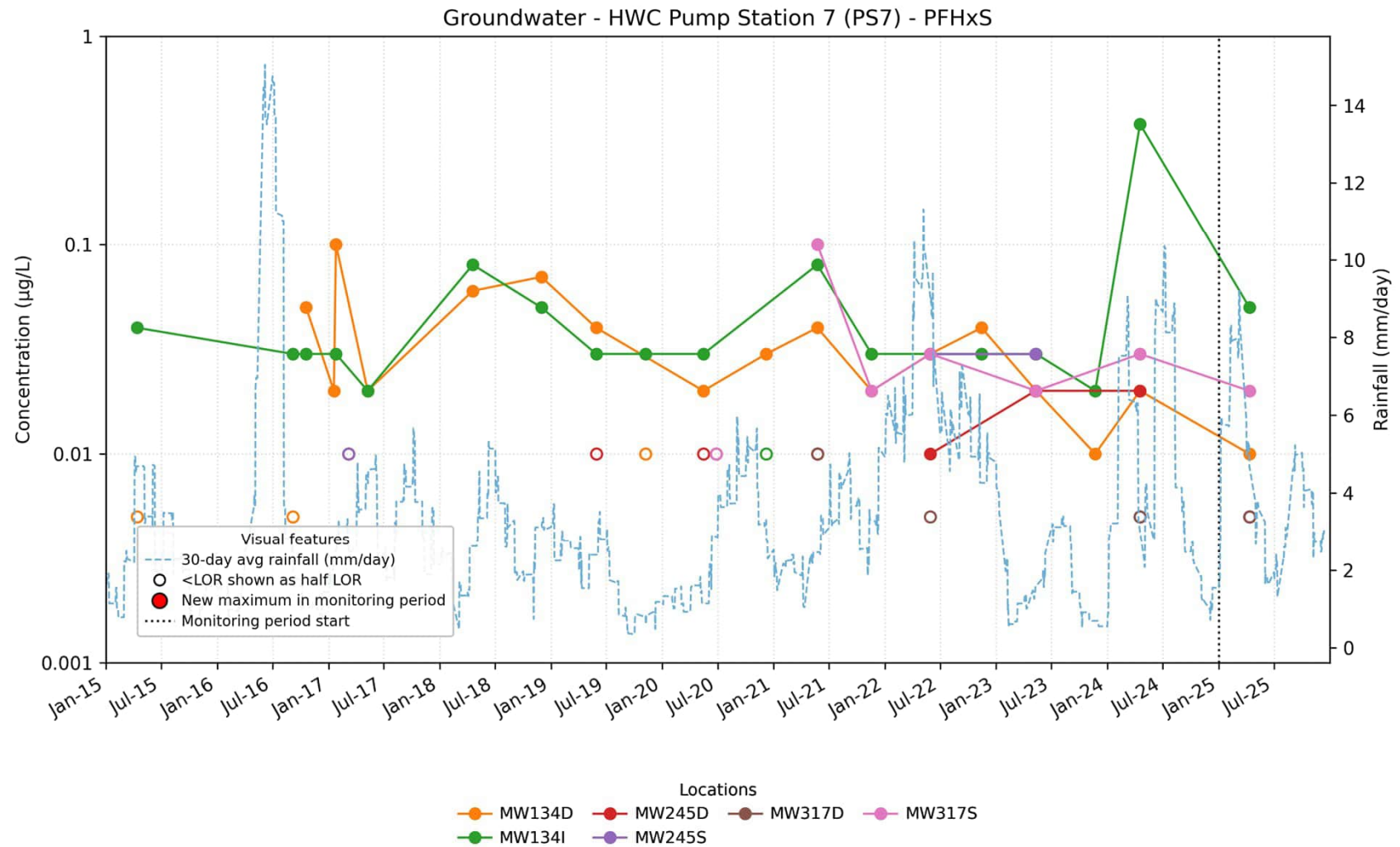
Graph G52 - Temporal Trend



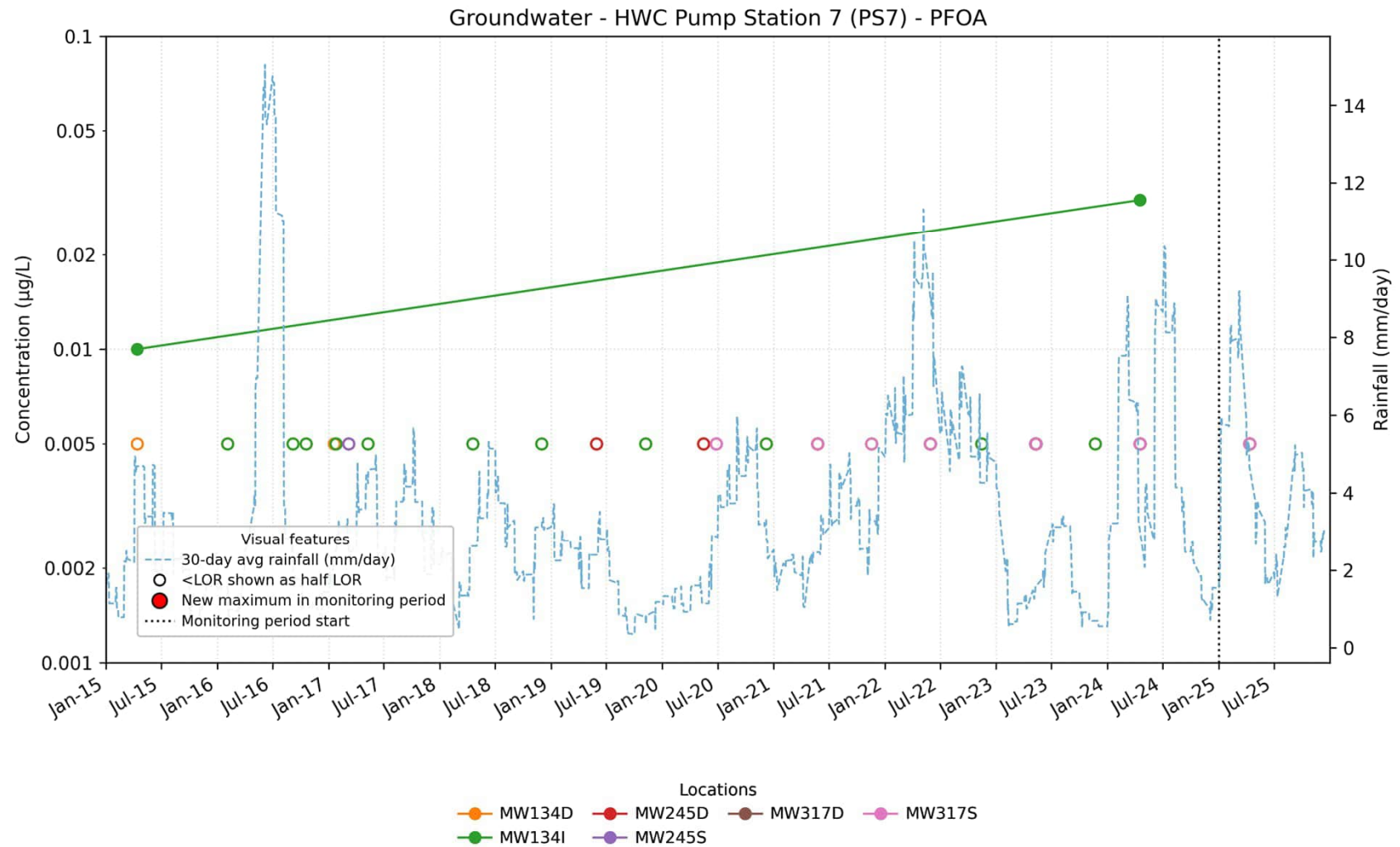
Graph G53 - Temporal Trend



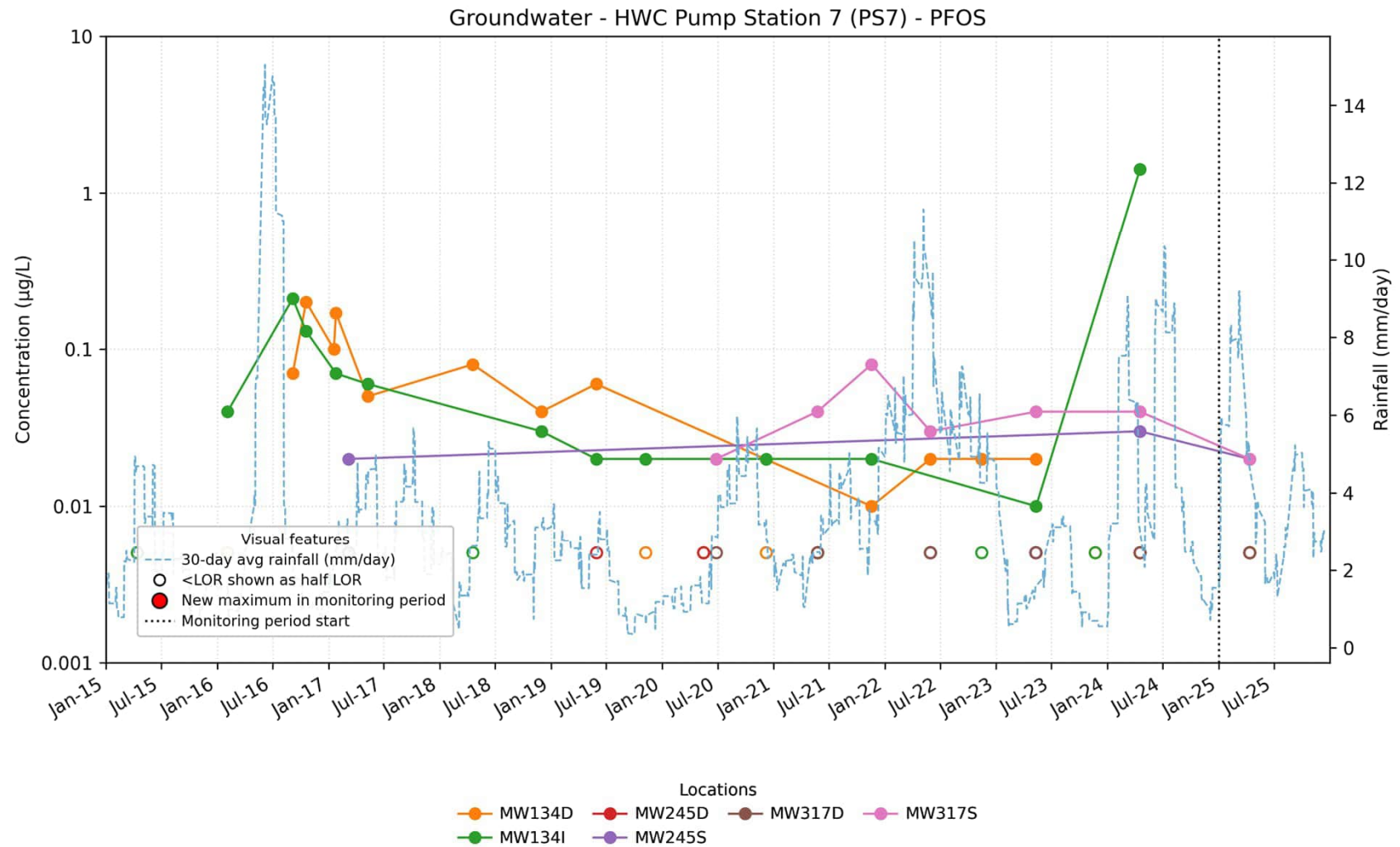
Graph G54 - Temporal Trend



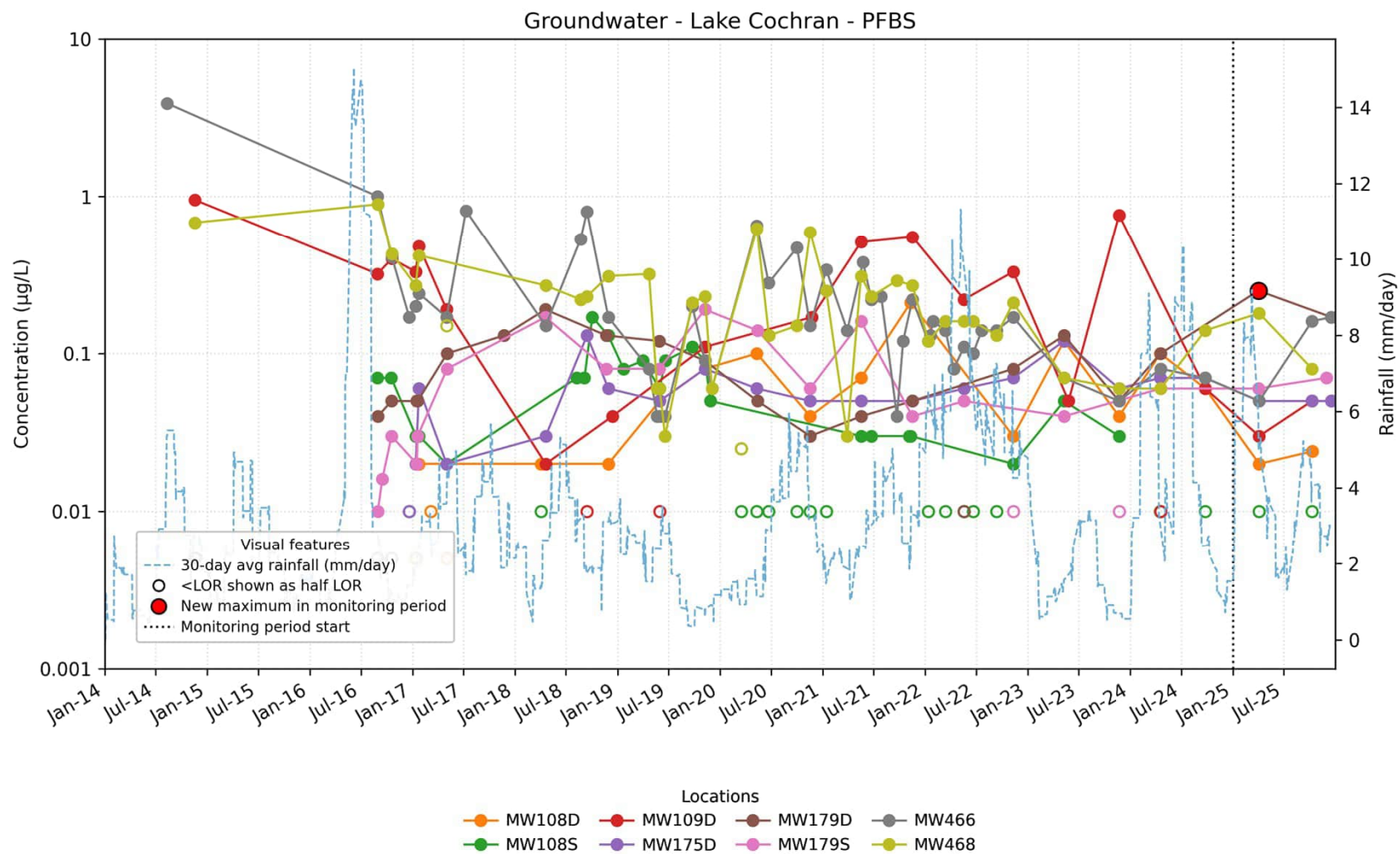
Graph G55 - Temporal Trend



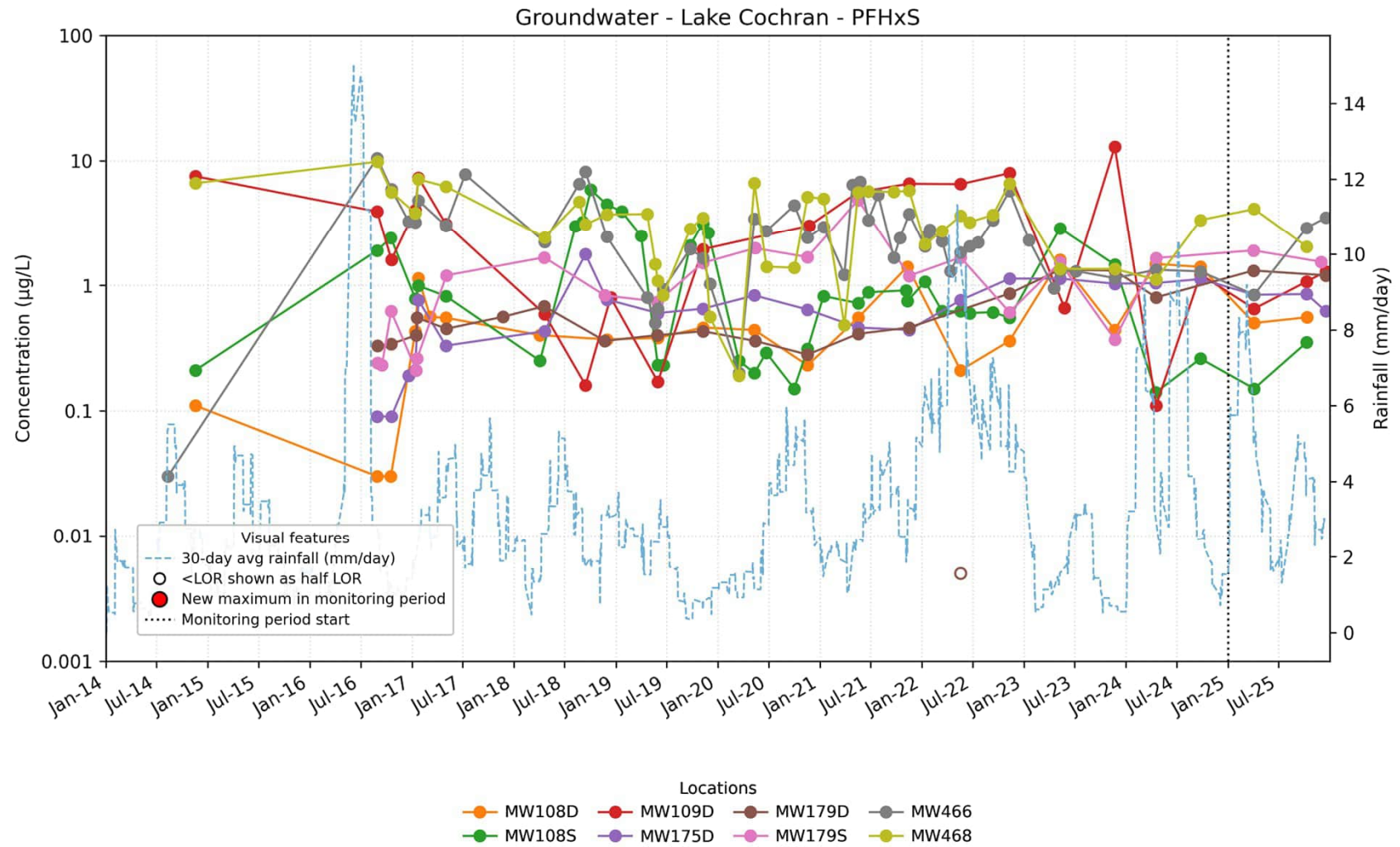
Graph G56 - Temporal Trend



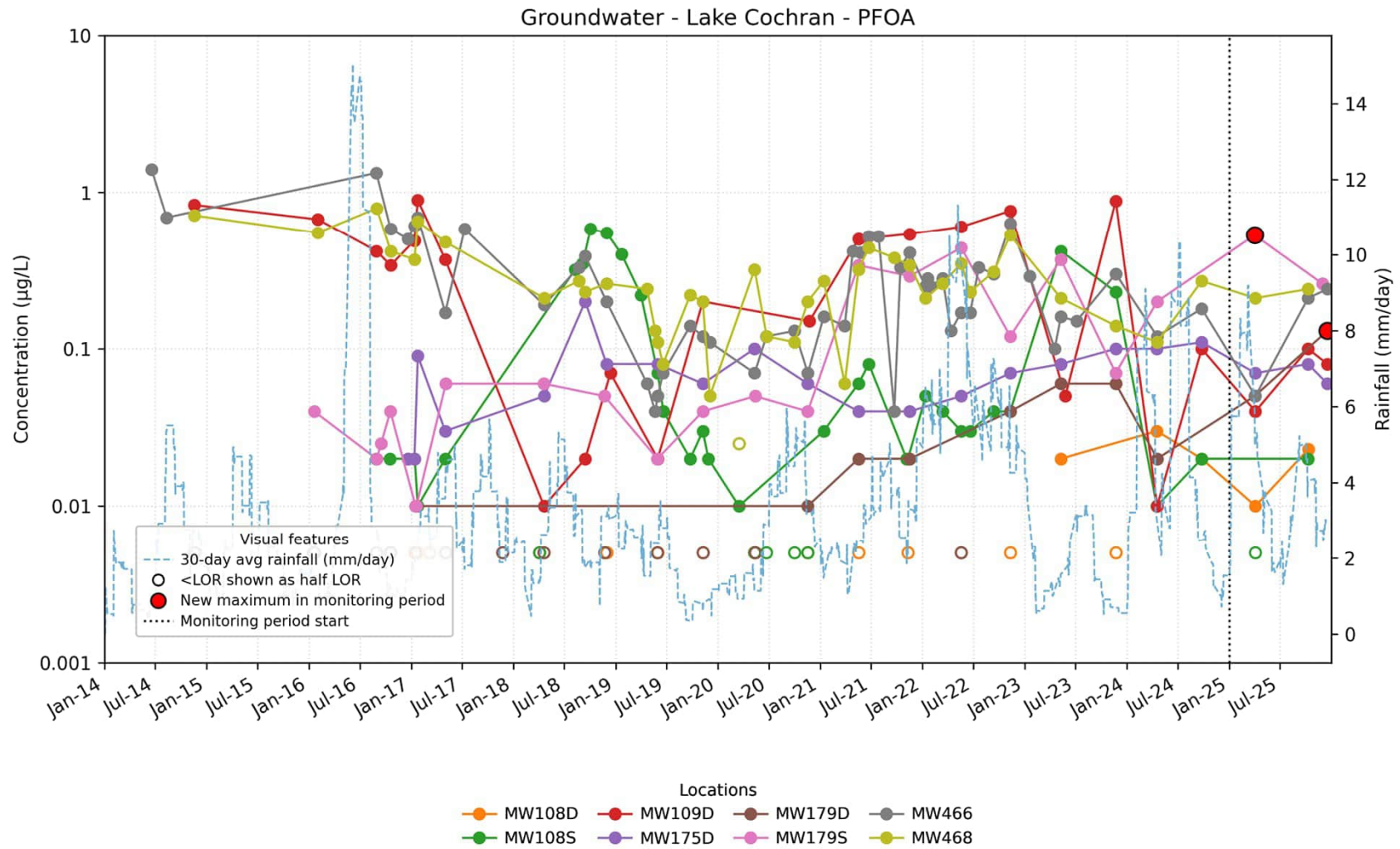
Graph G57 - Temporal Trend



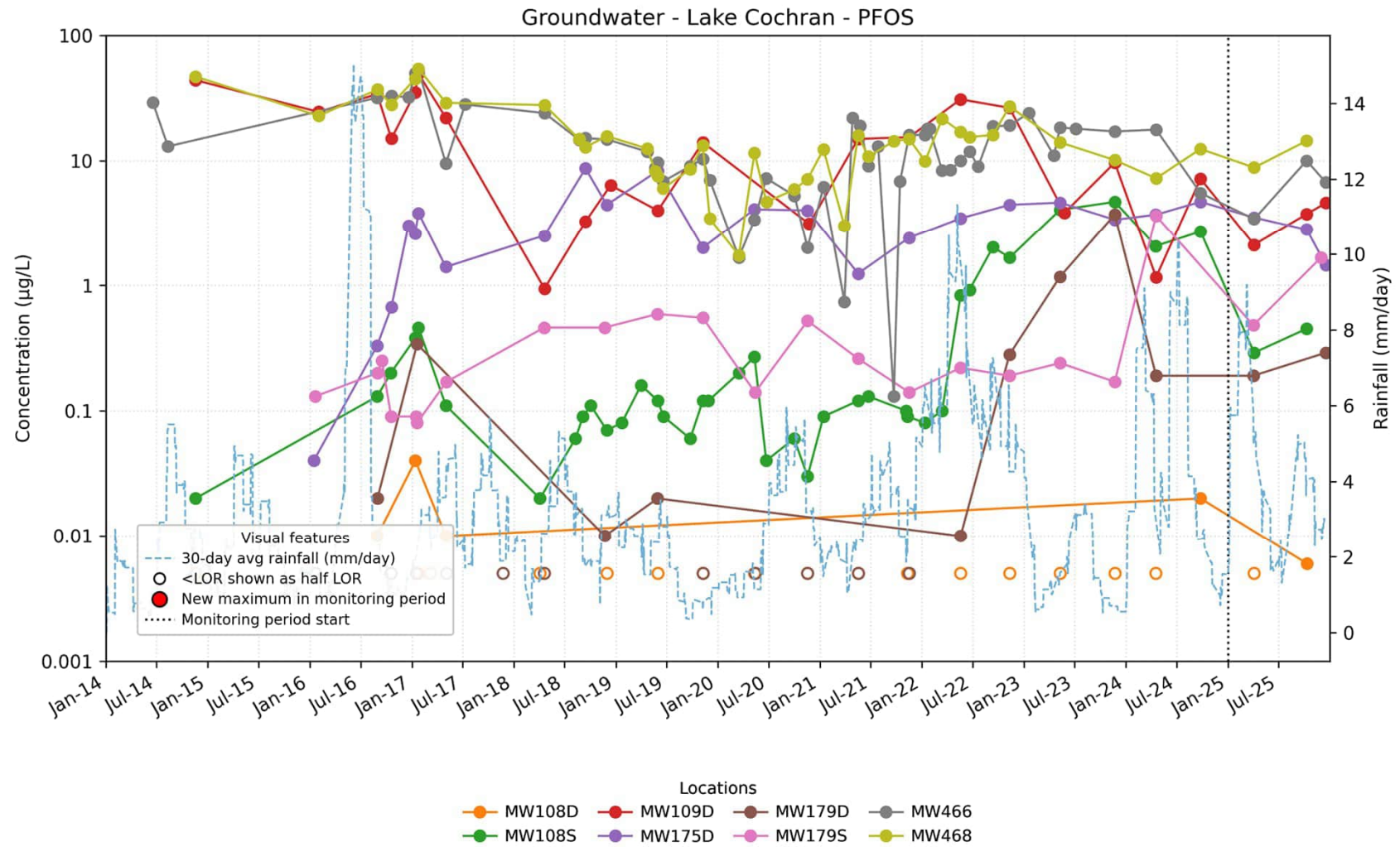
Graph G58 - Temporal Trend



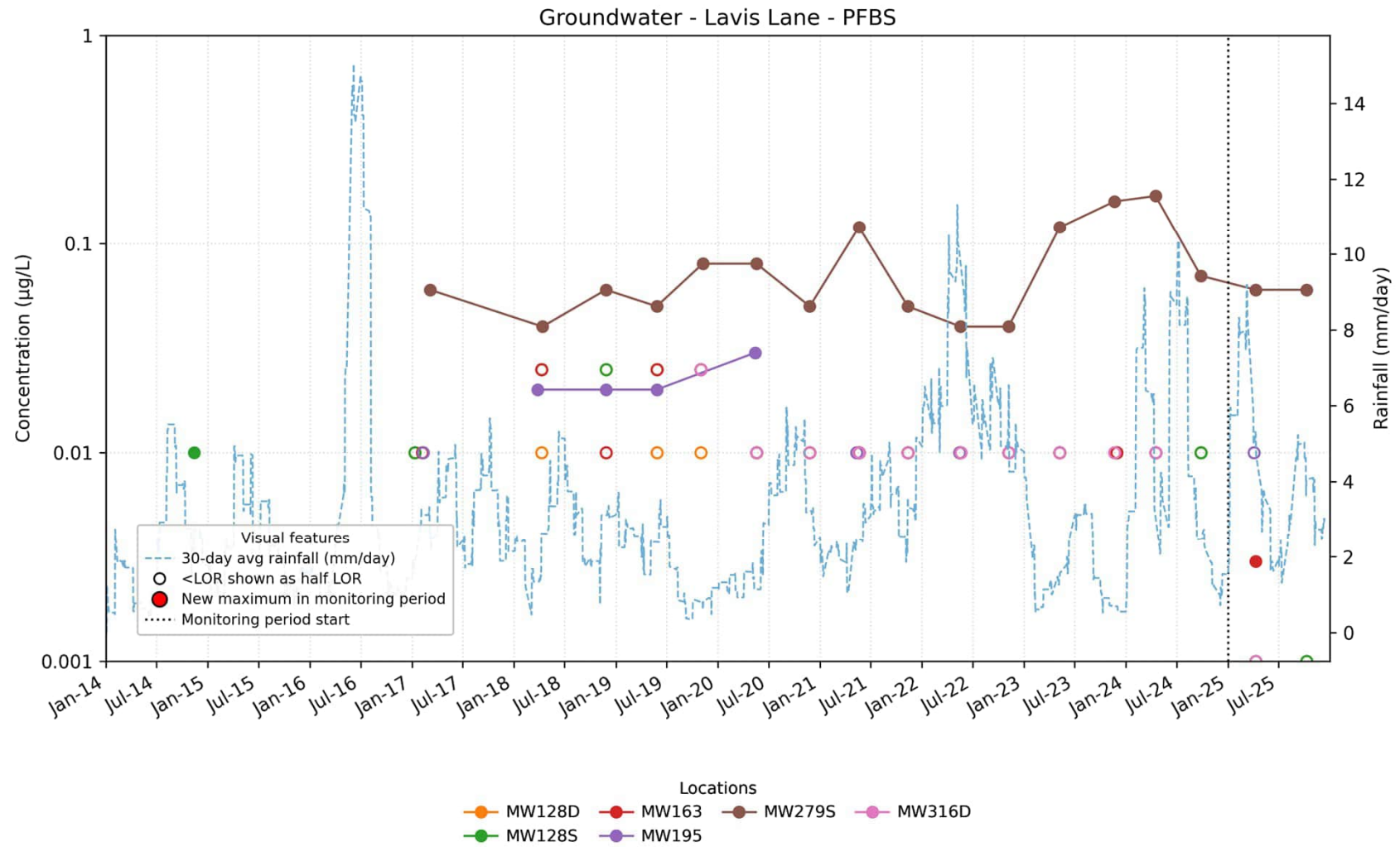
Graph G59 - Temporal Trend



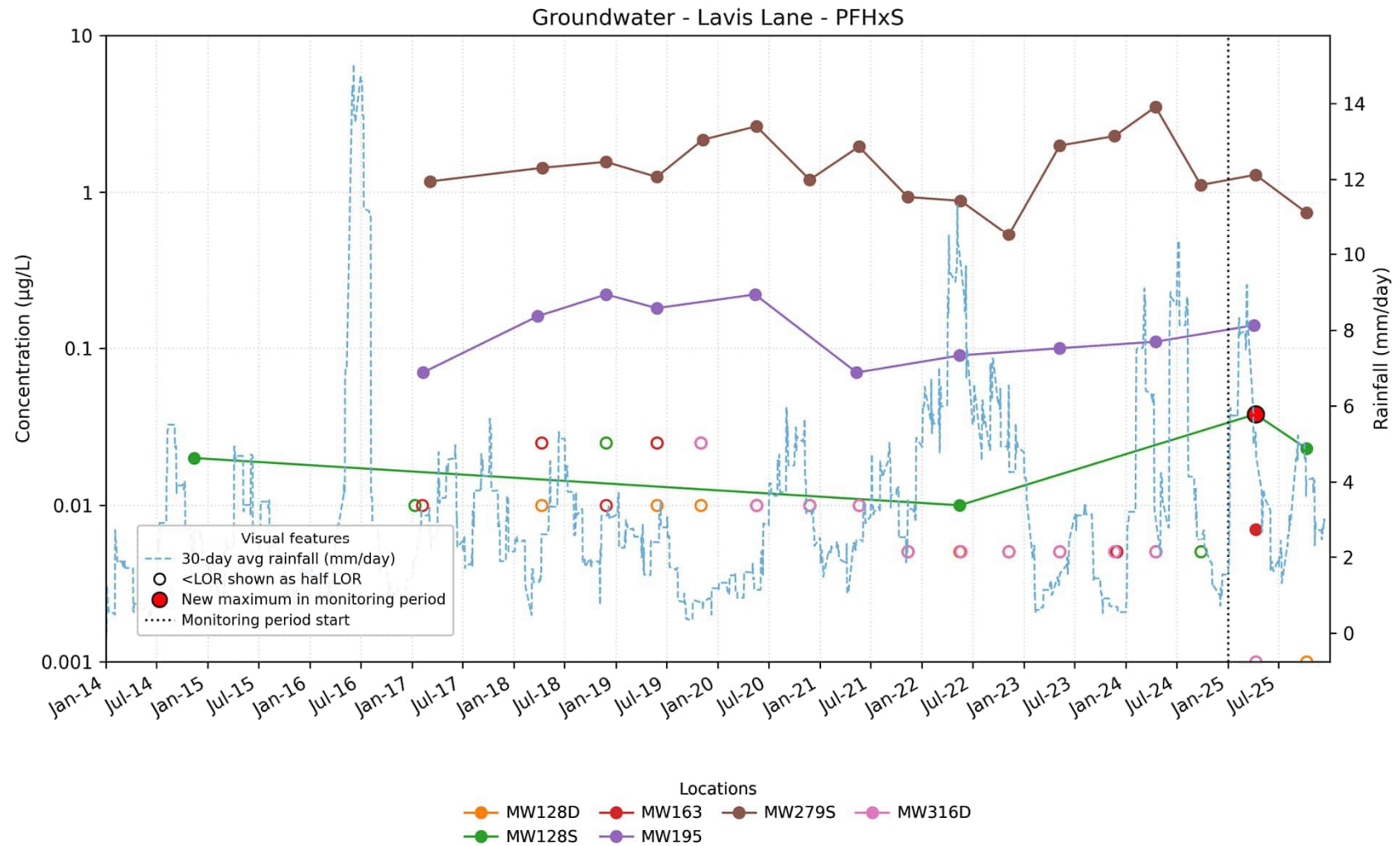
Graph G60 - Temporal Trend



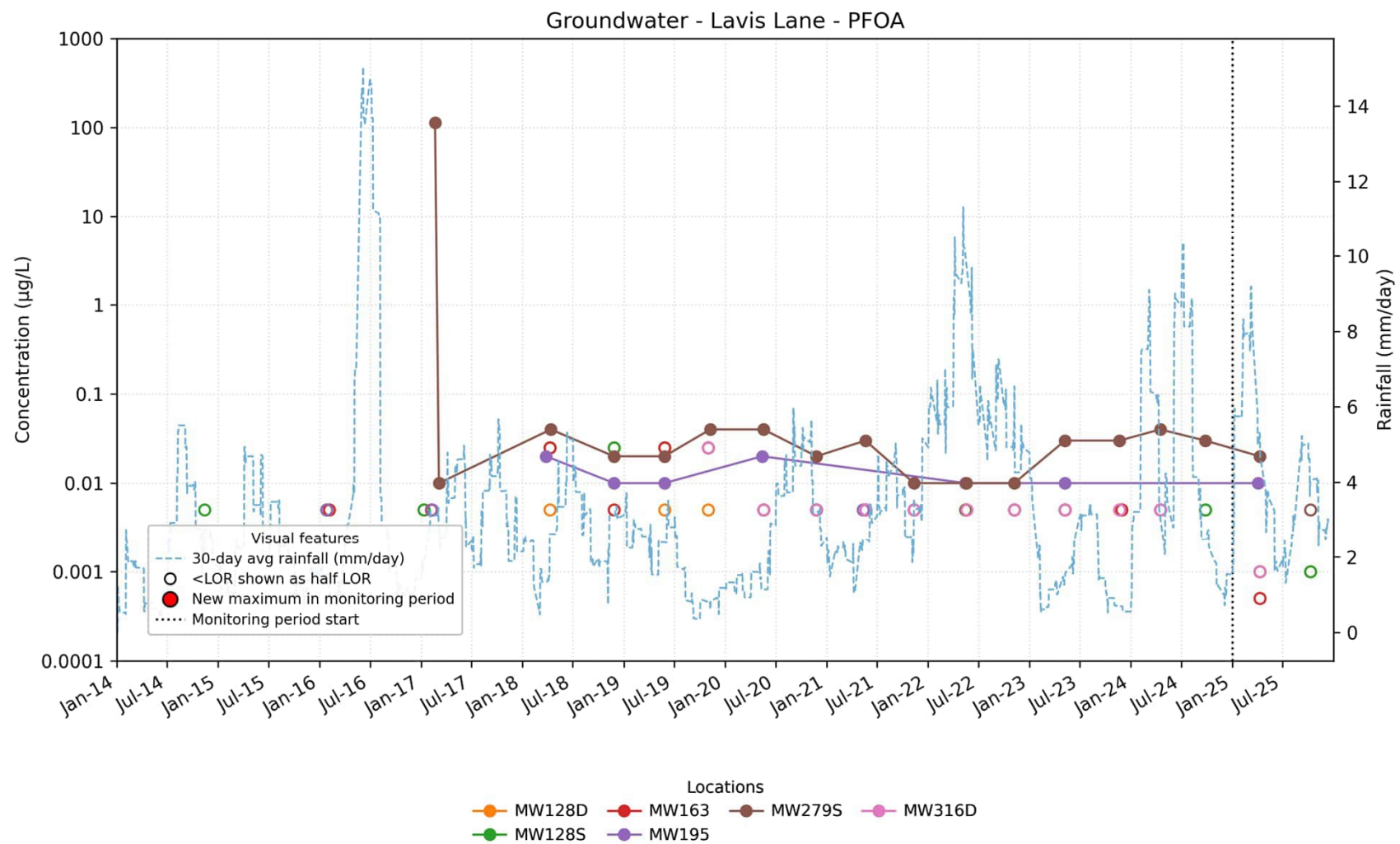
Graph G61 - Temporal Trend



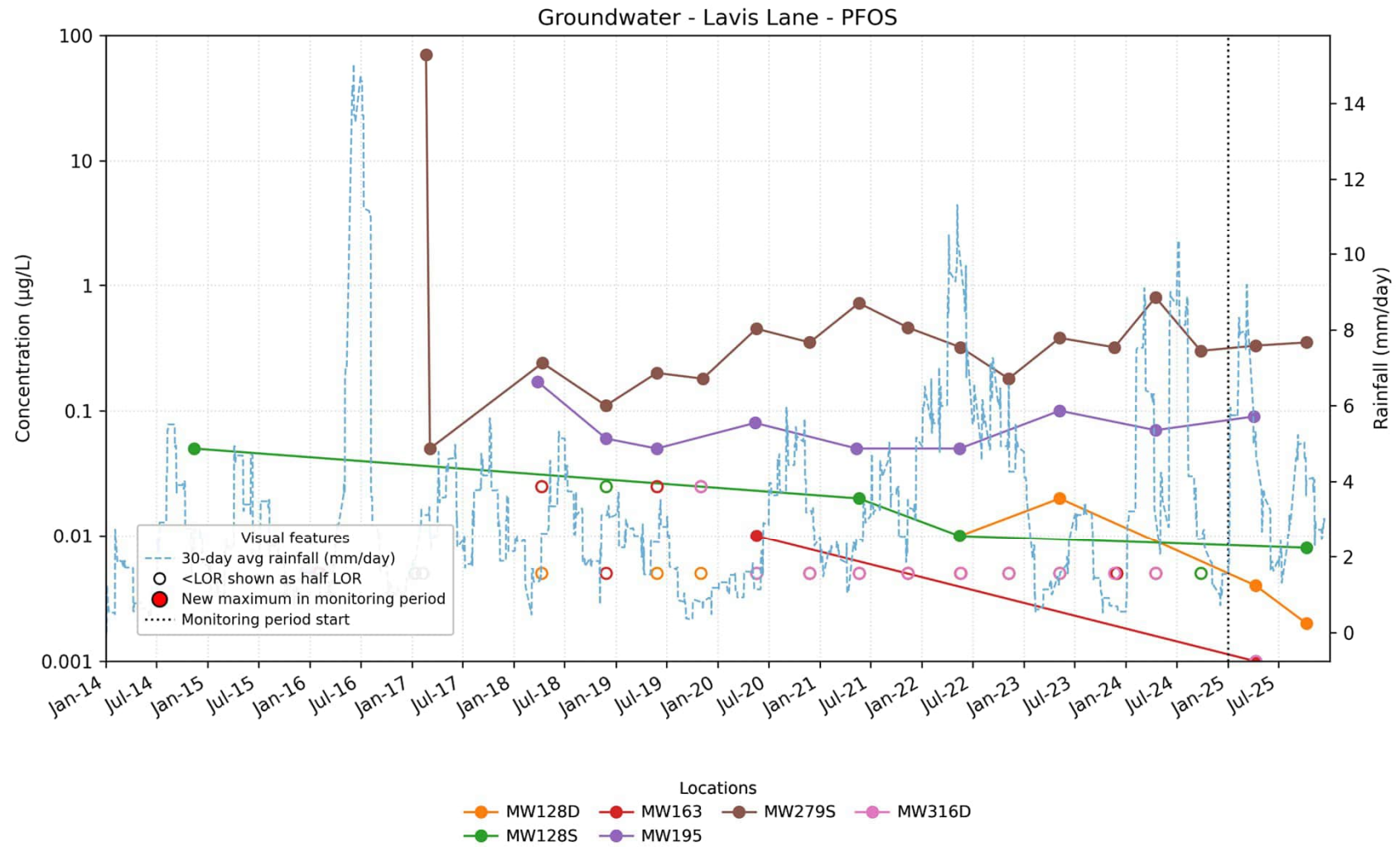
Graph G62 - Temporal Trend



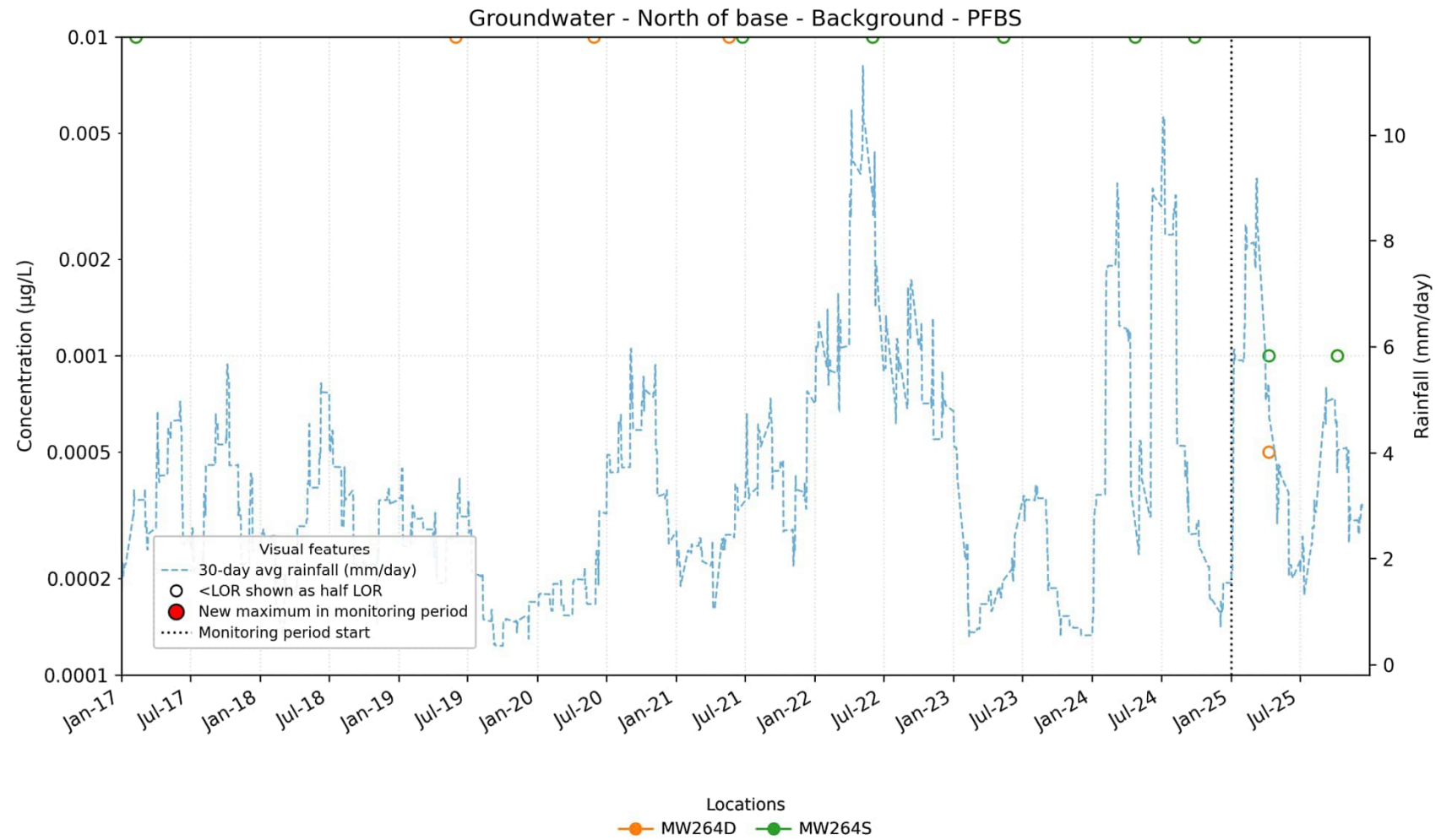
Graph G63 - Temporal Trend



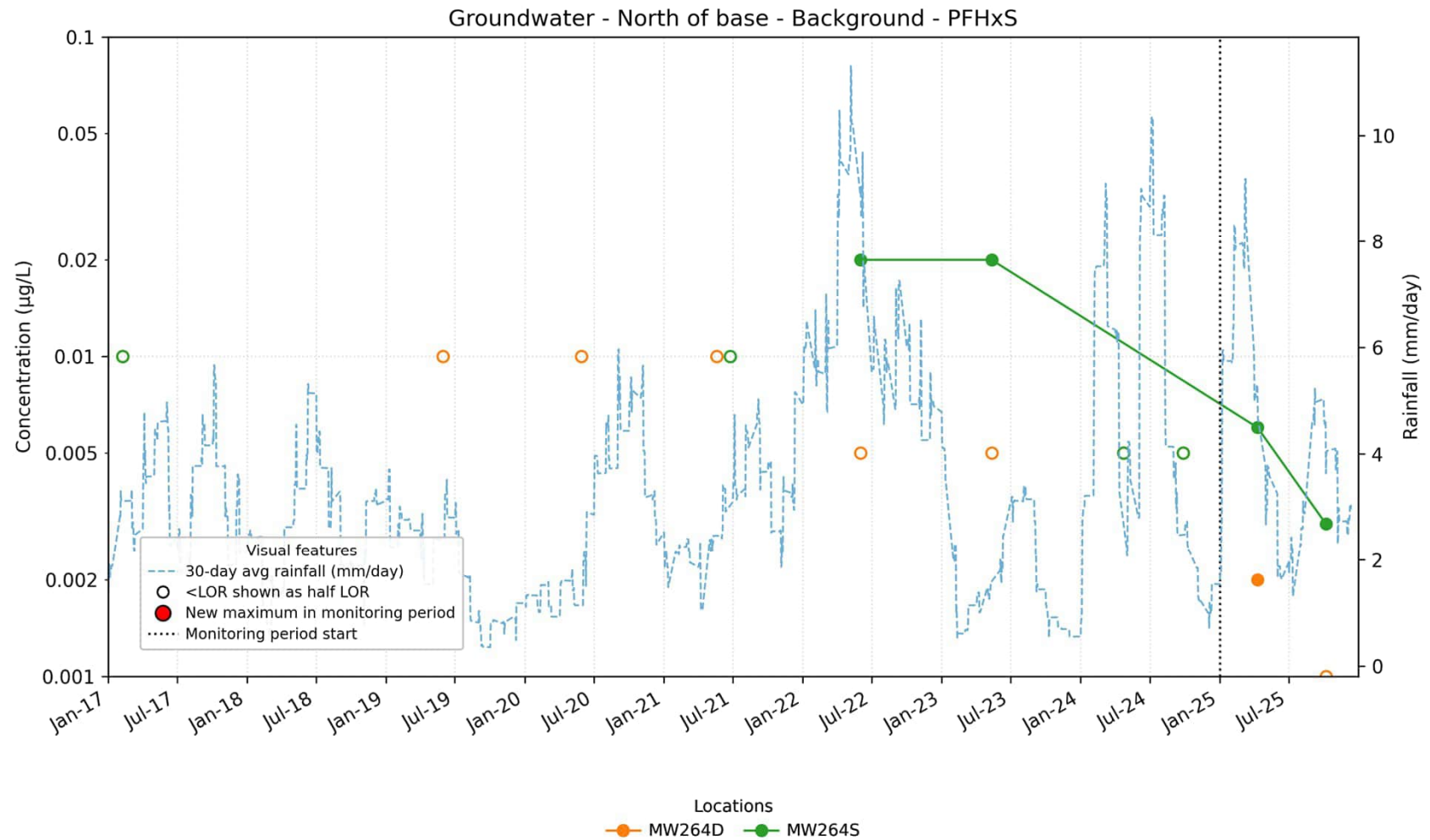
Graph G64 - Temporal Trend



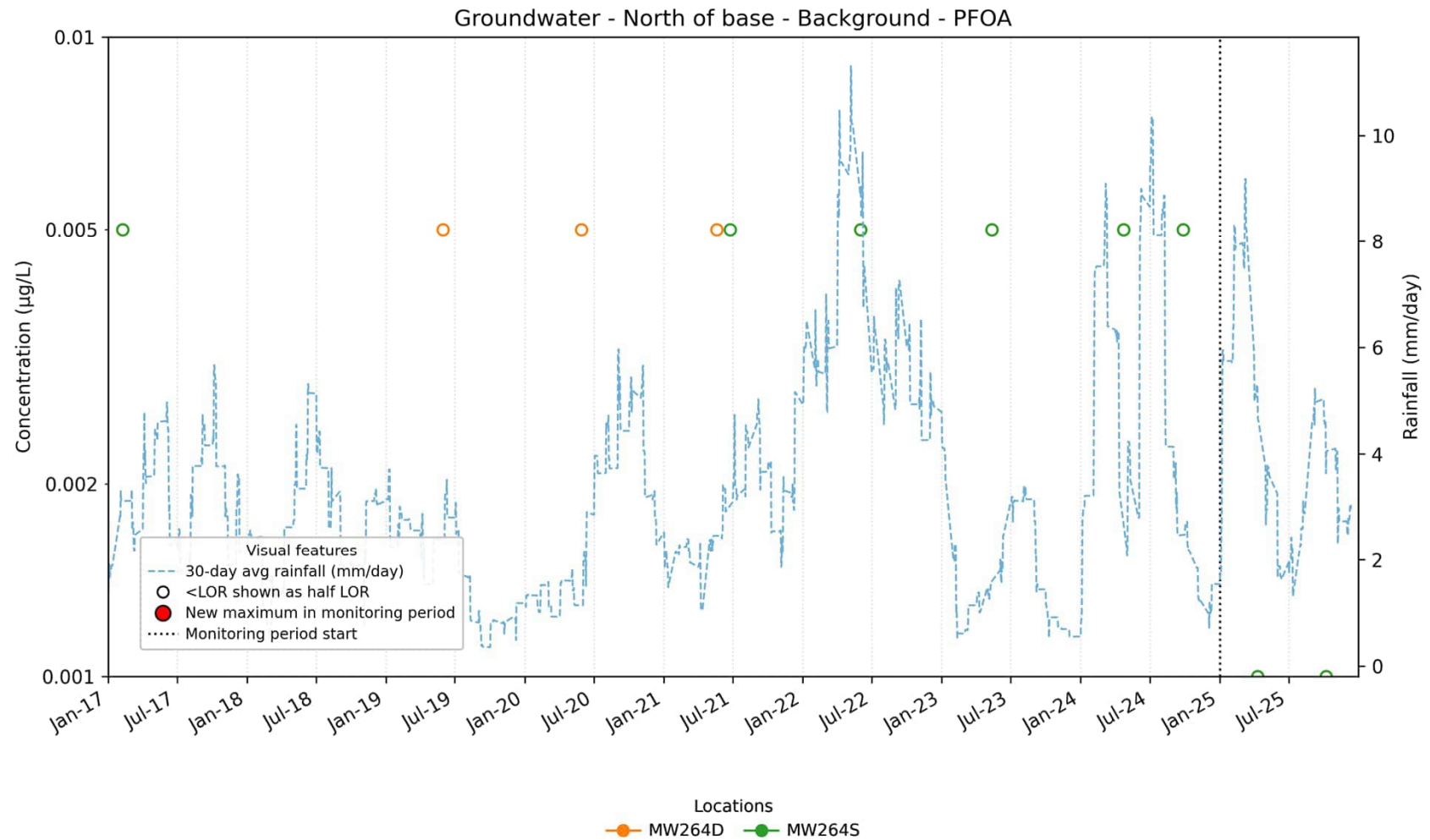
Graph G65 - Temporal Trend



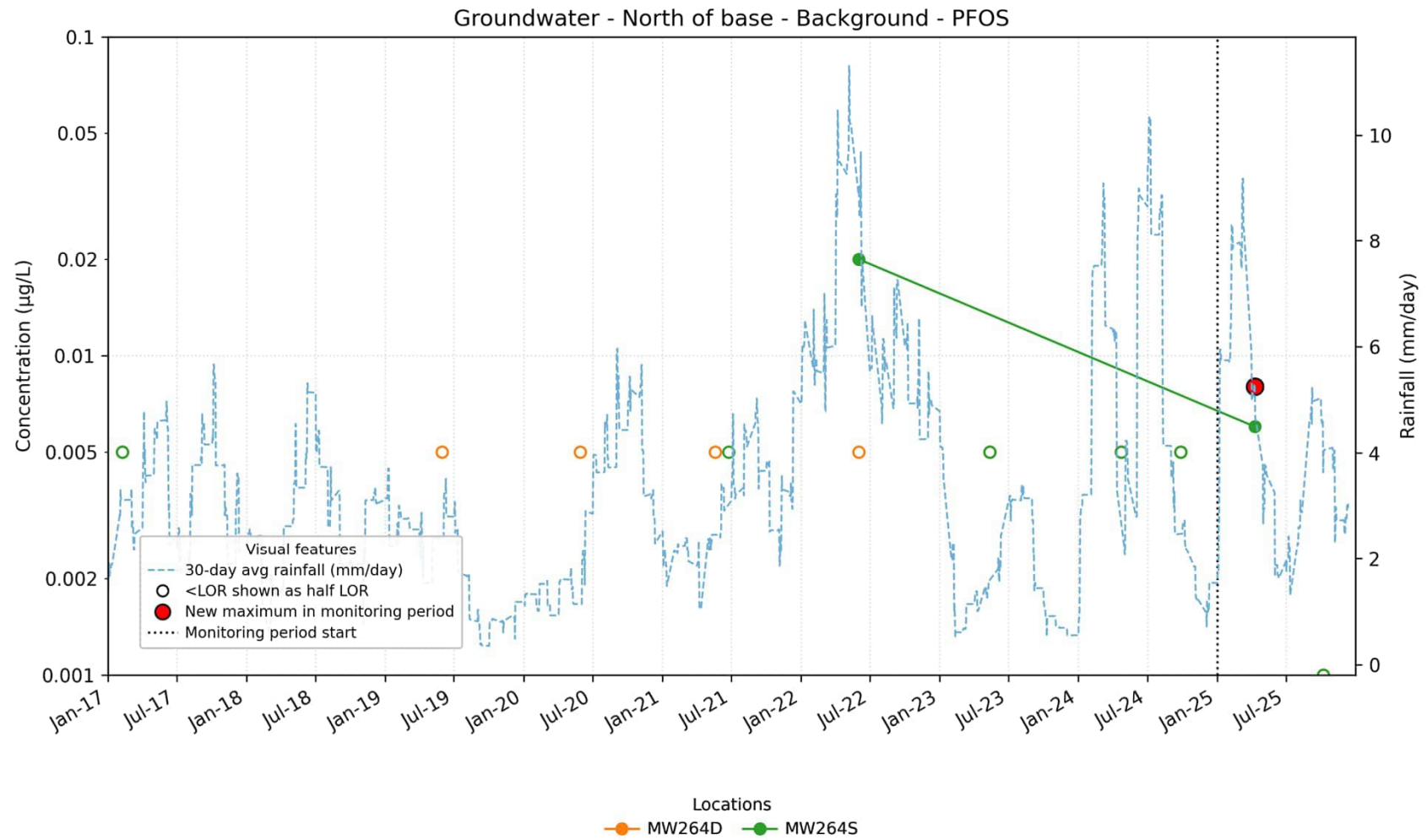
Graph G66 - Temporal Trend



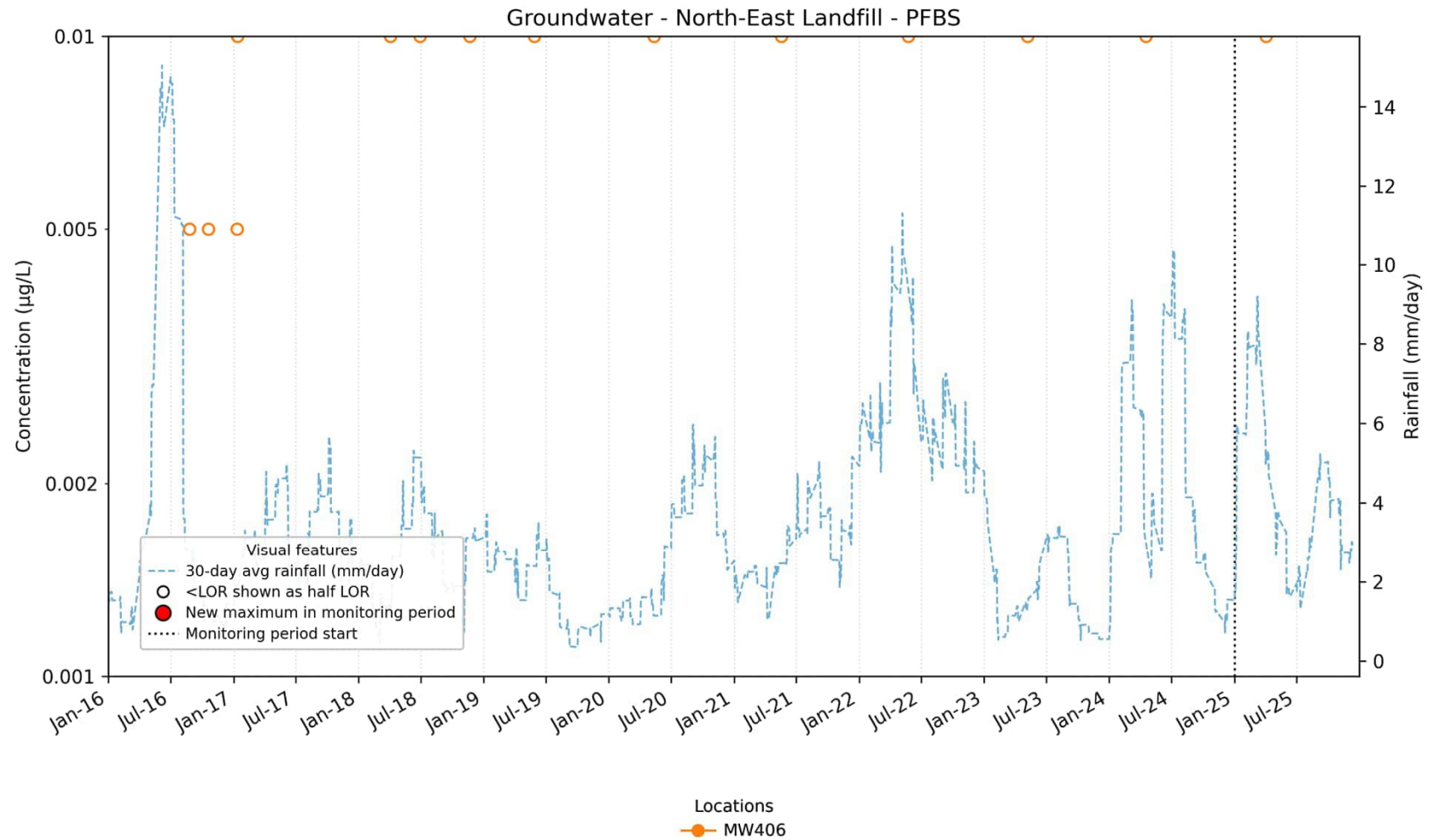
Graph G67 - Temporal Trend



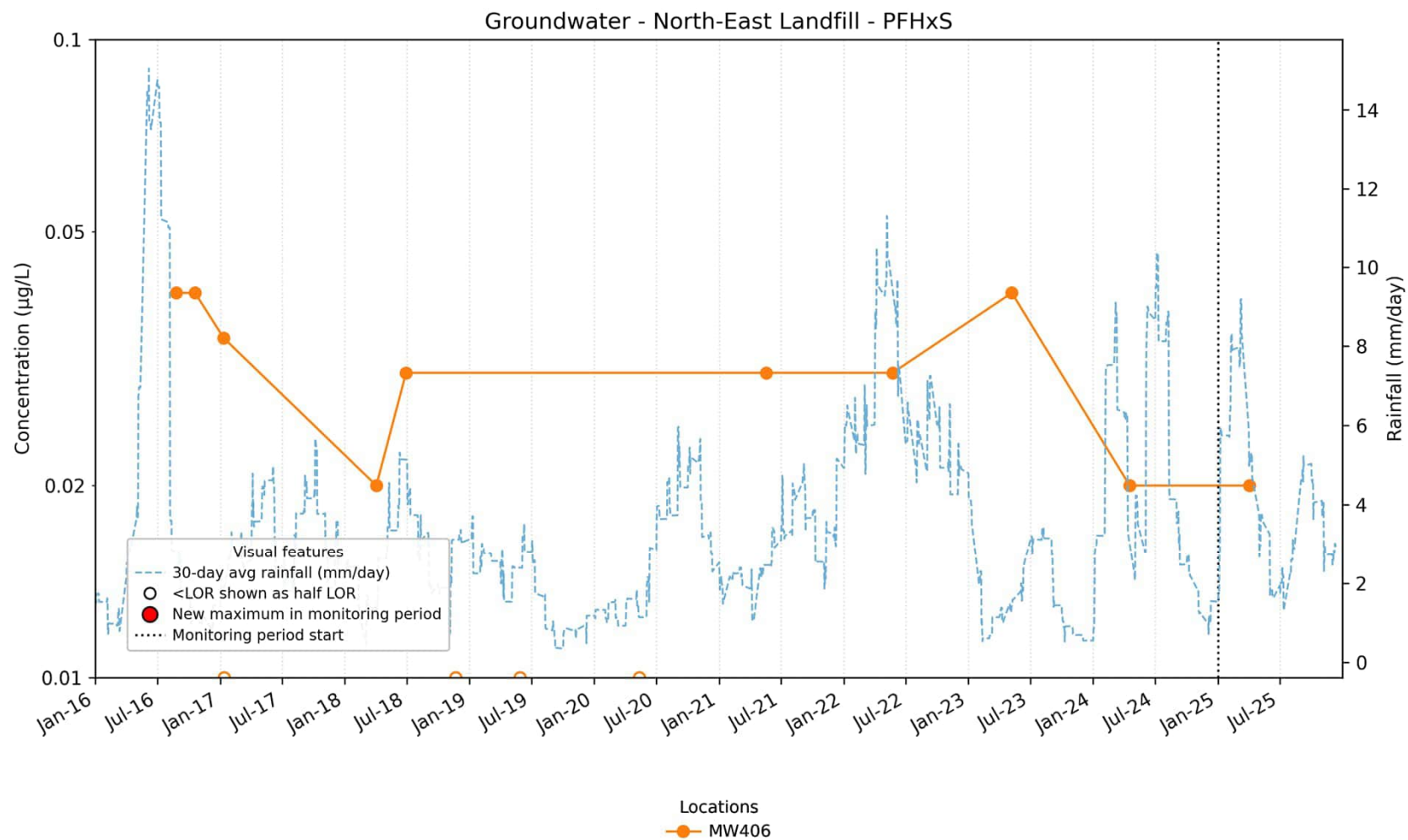
Graph G68 - Temporal Trend



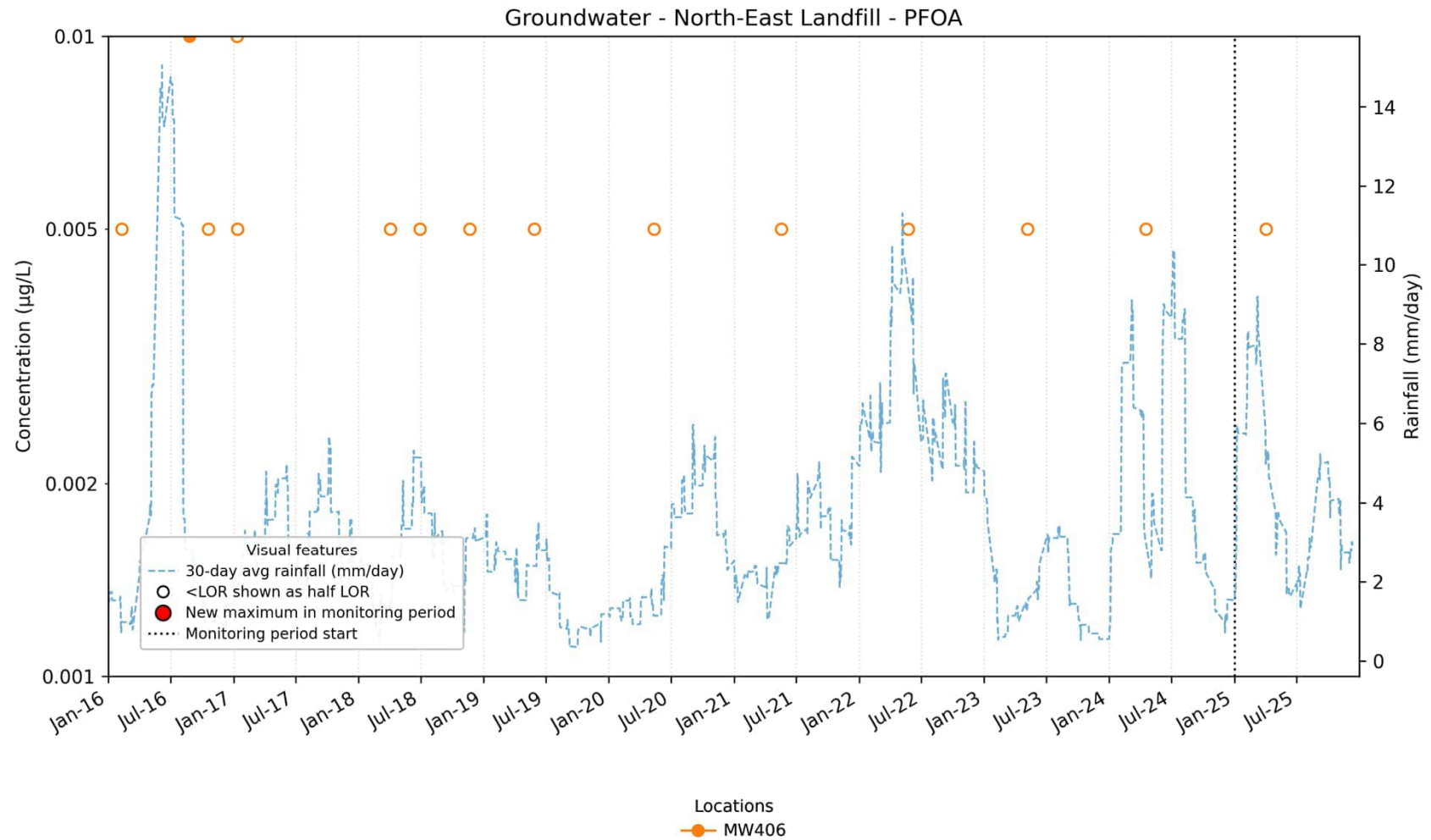
Graph G69 - Temporal Trend



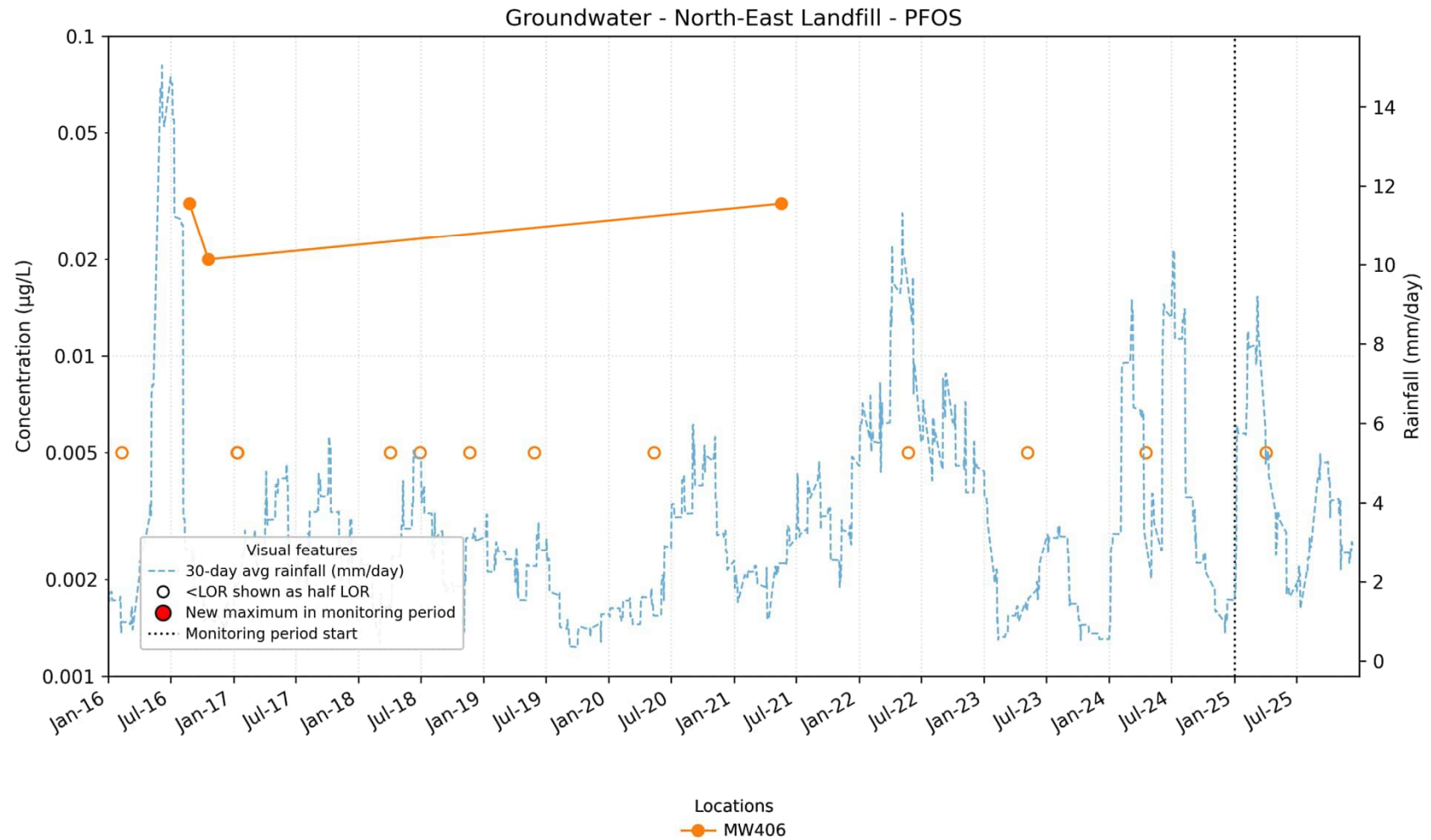
Graph G70 - Temporal Trend



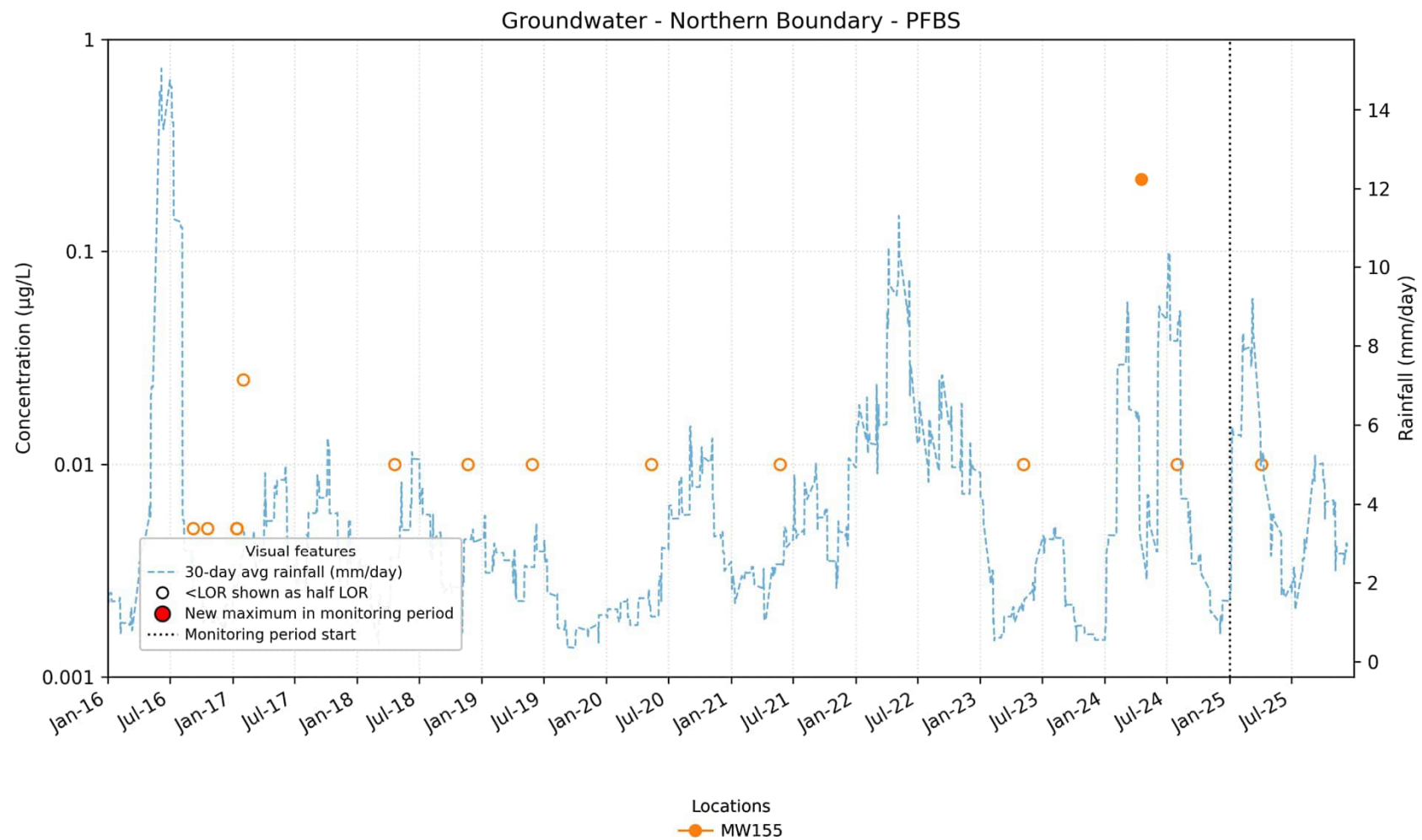
Graph G71 - Temporal Trend



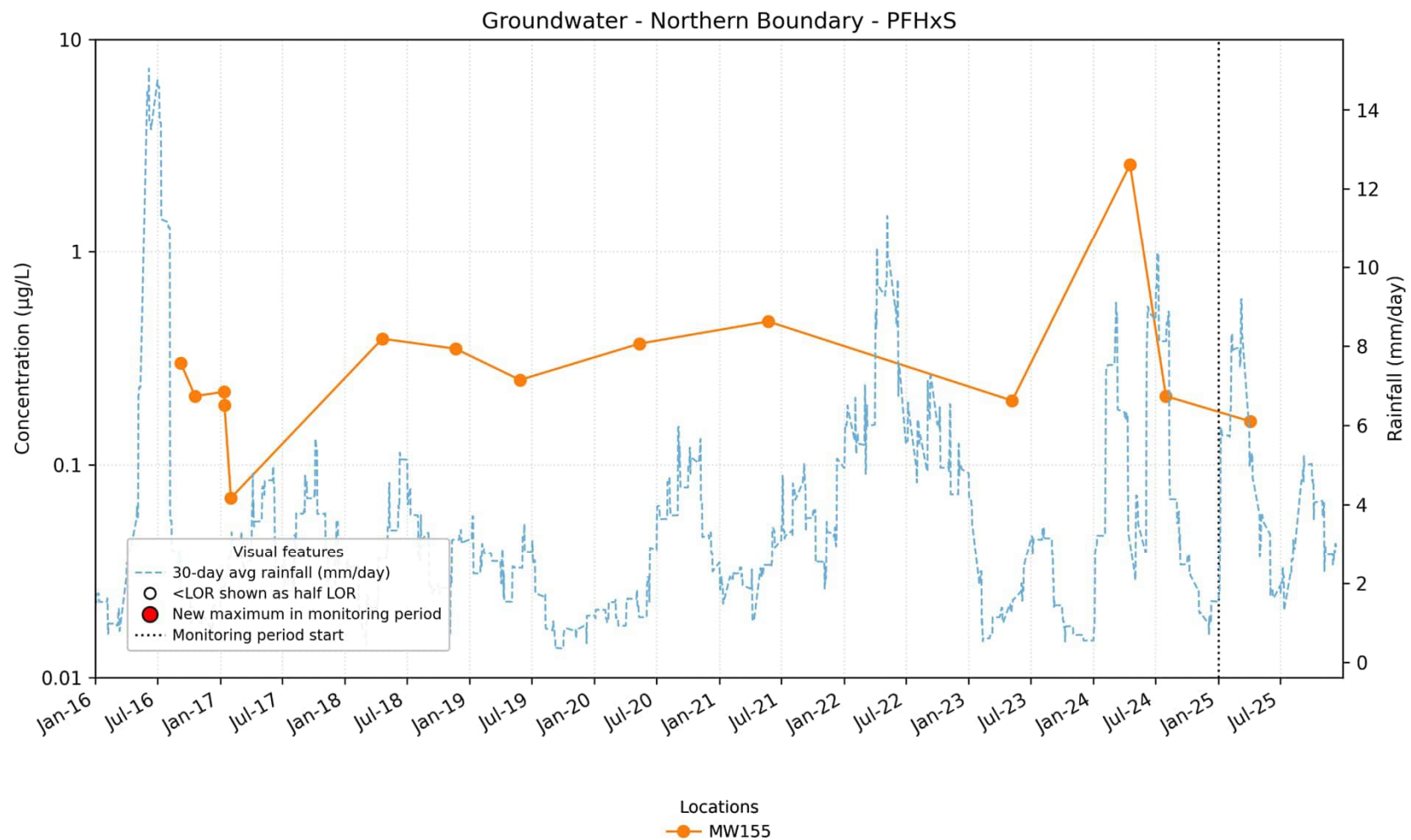
Graph G72 - Temporal Trend



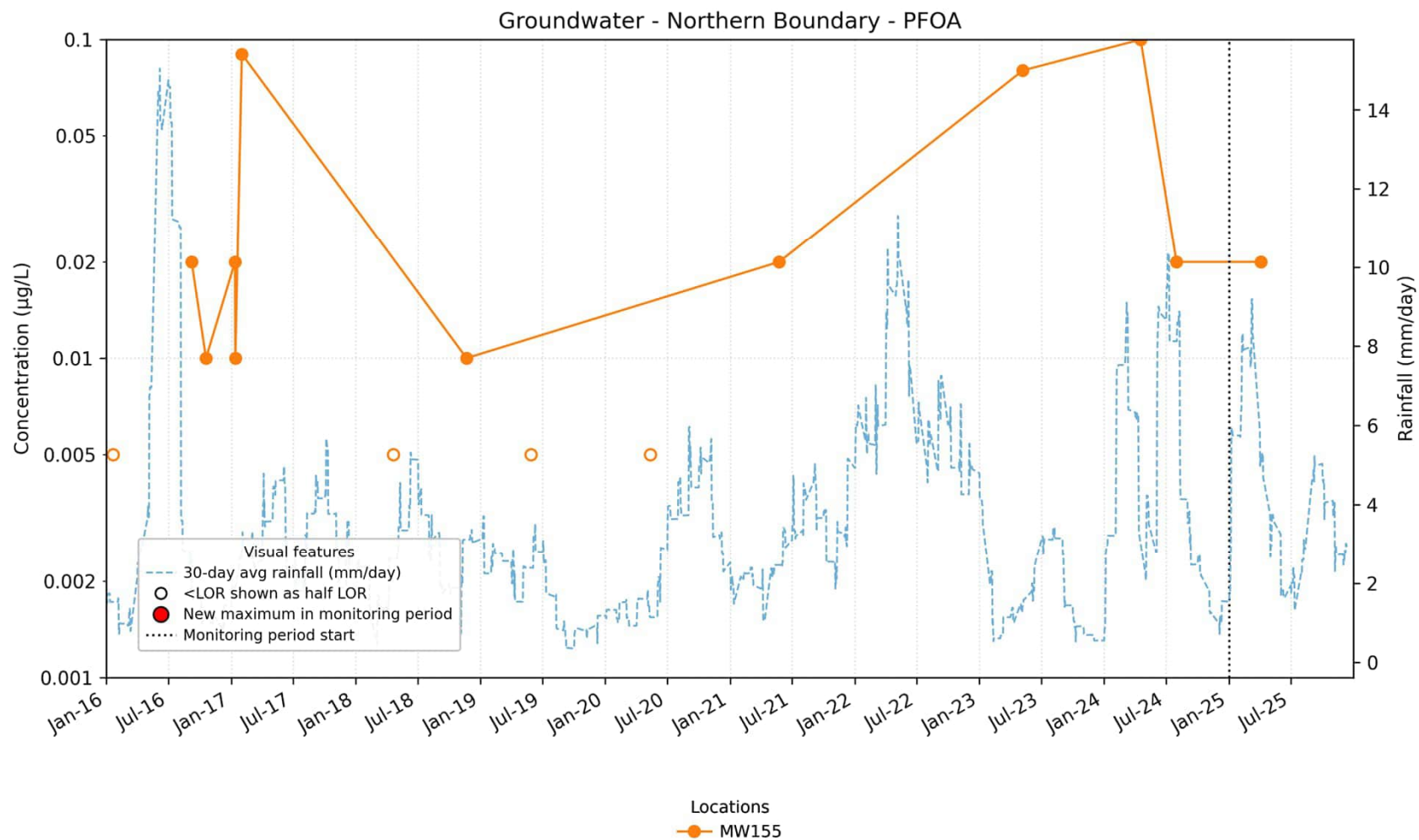
Graph G73 - Temporal Trend



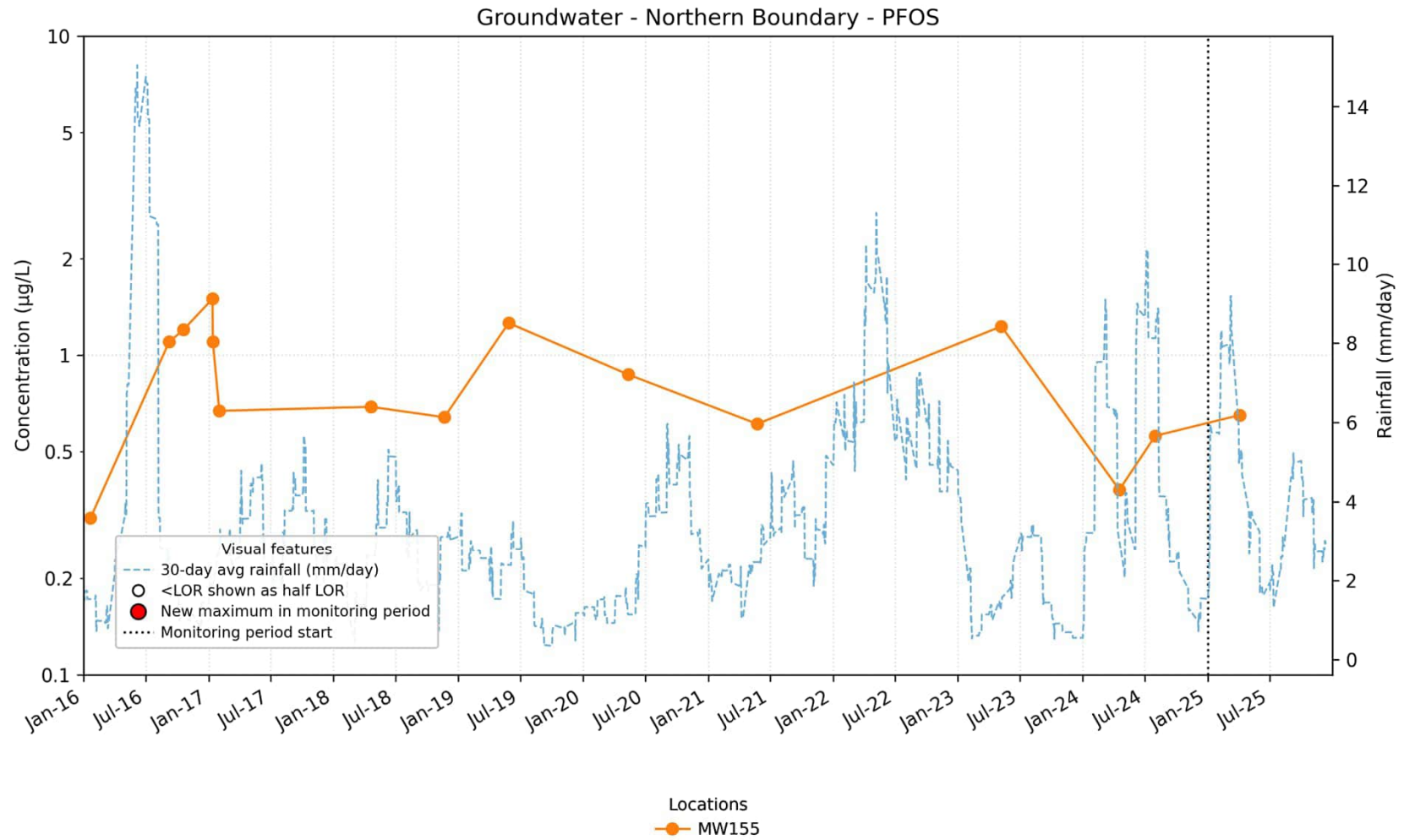
Graph G74 - Temporal Trend



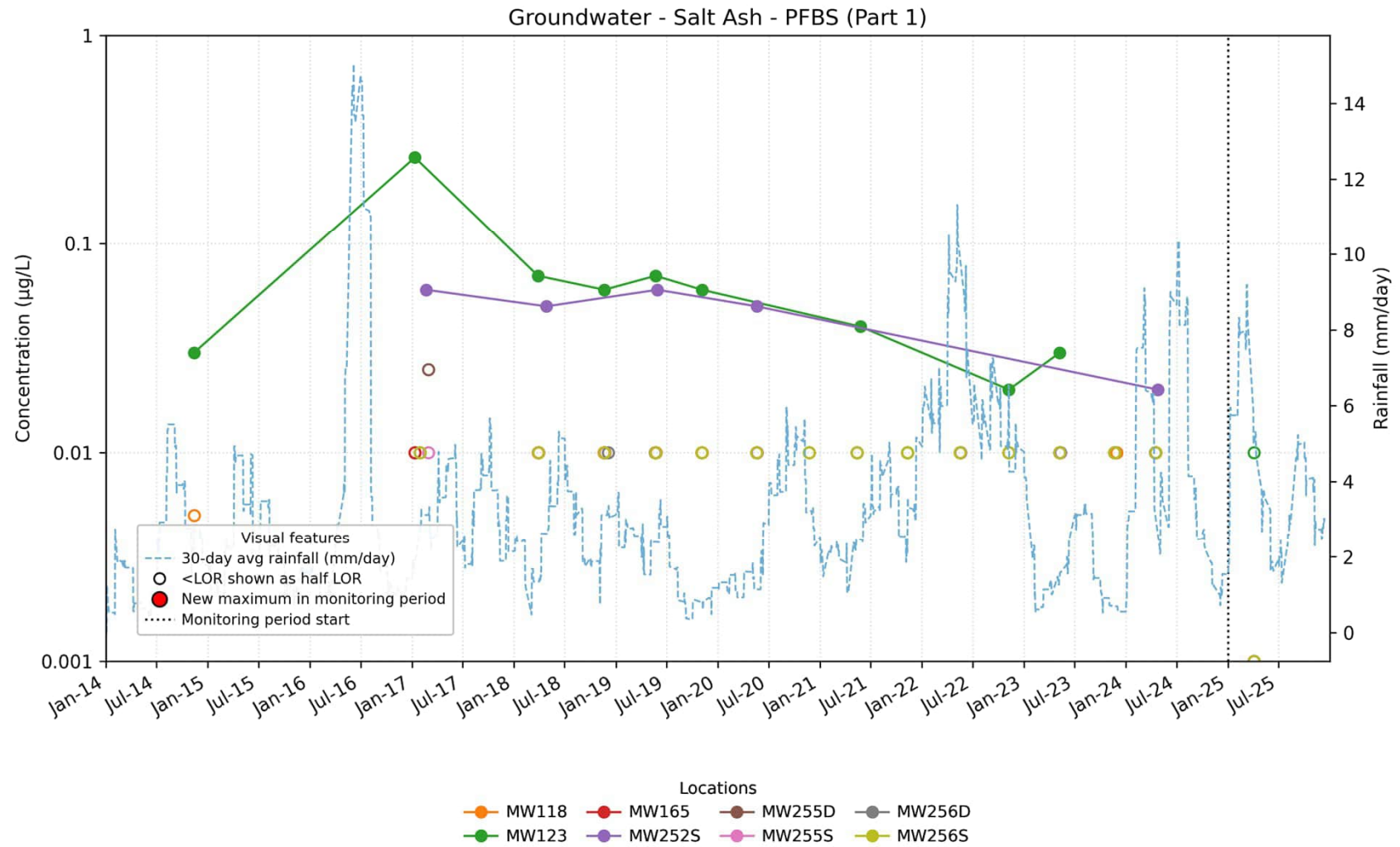
Graph G75 - Temporal Trend



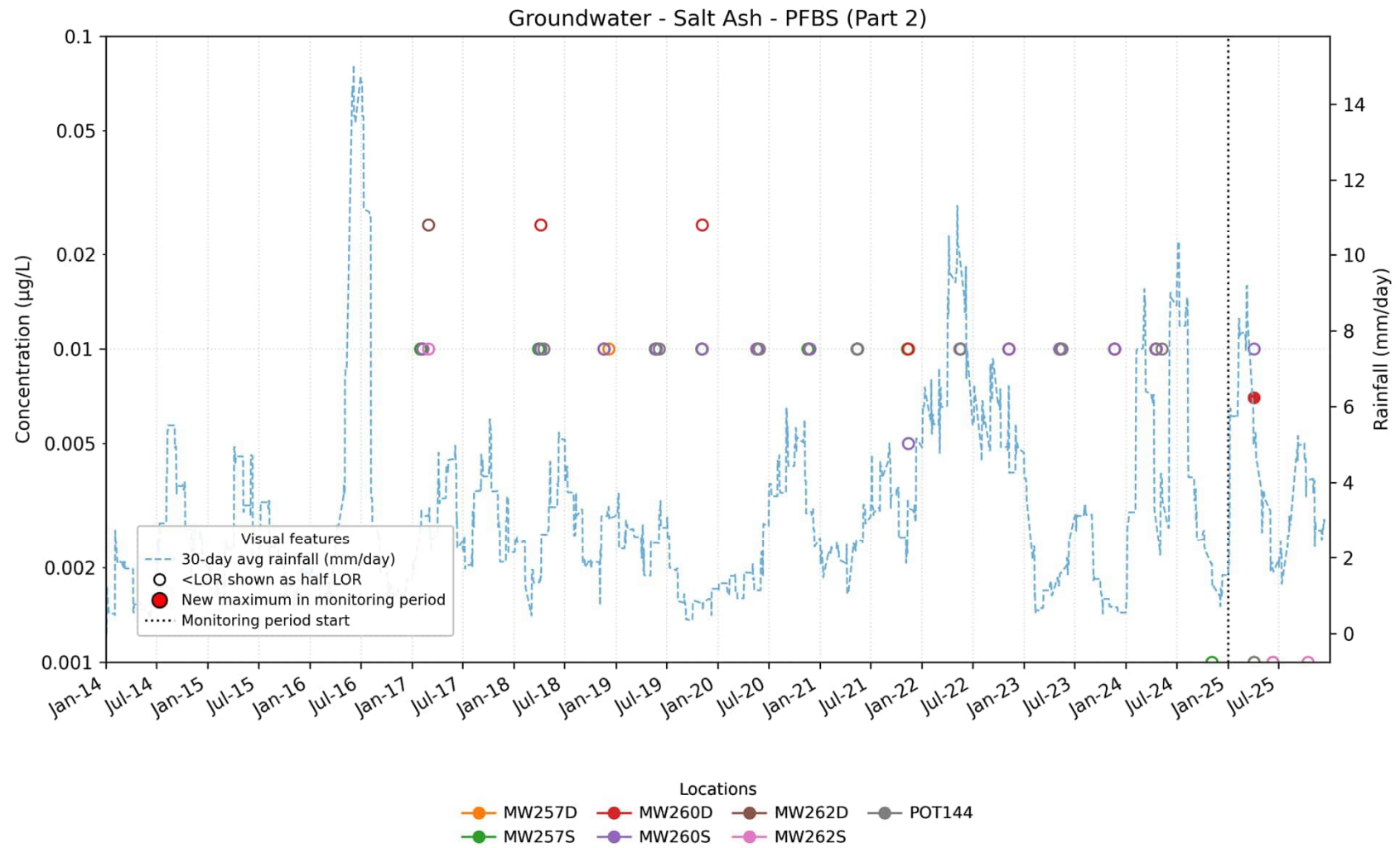
Graph G76 - Temporal Trend



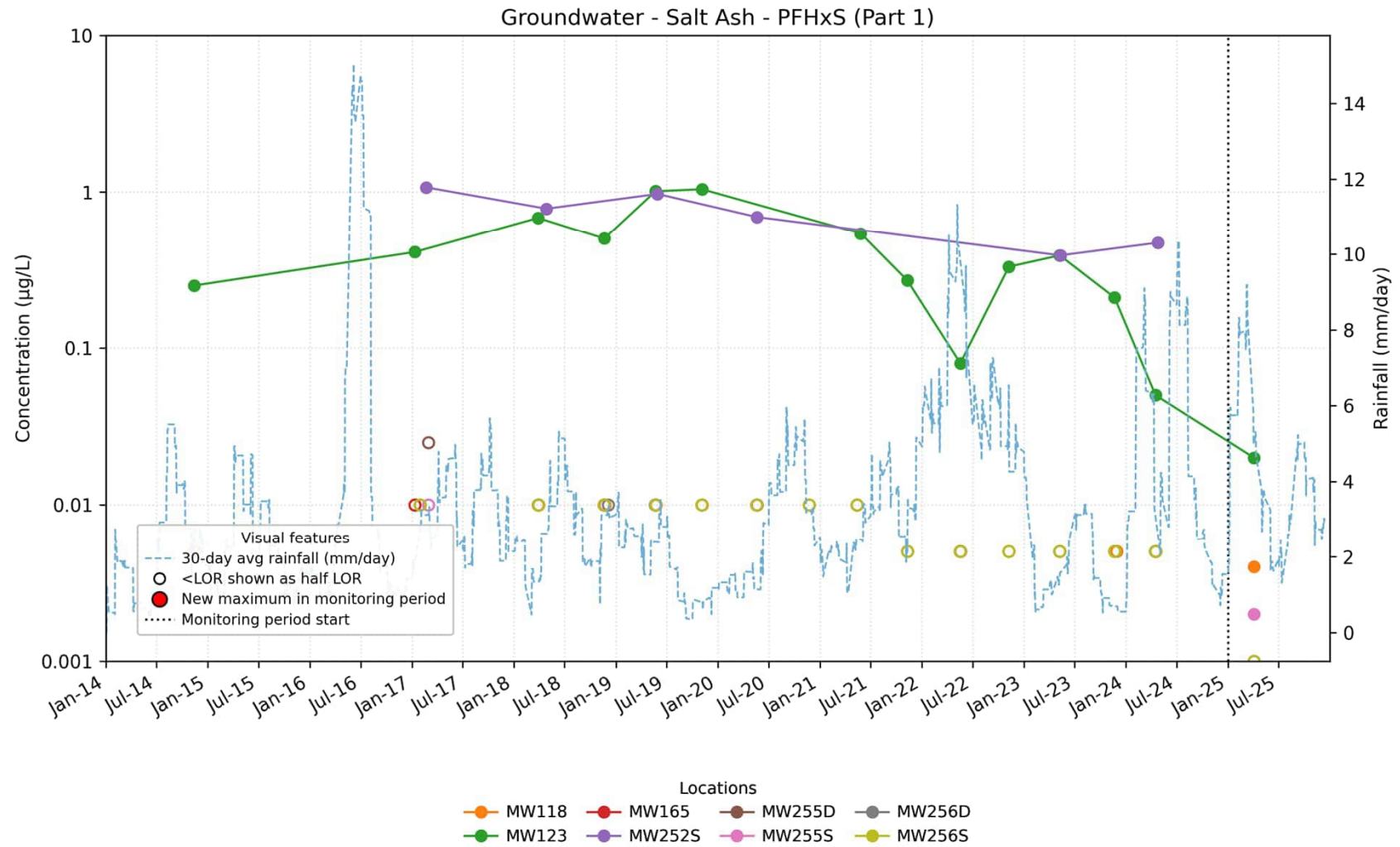
Graph G77 - Temporal Trend



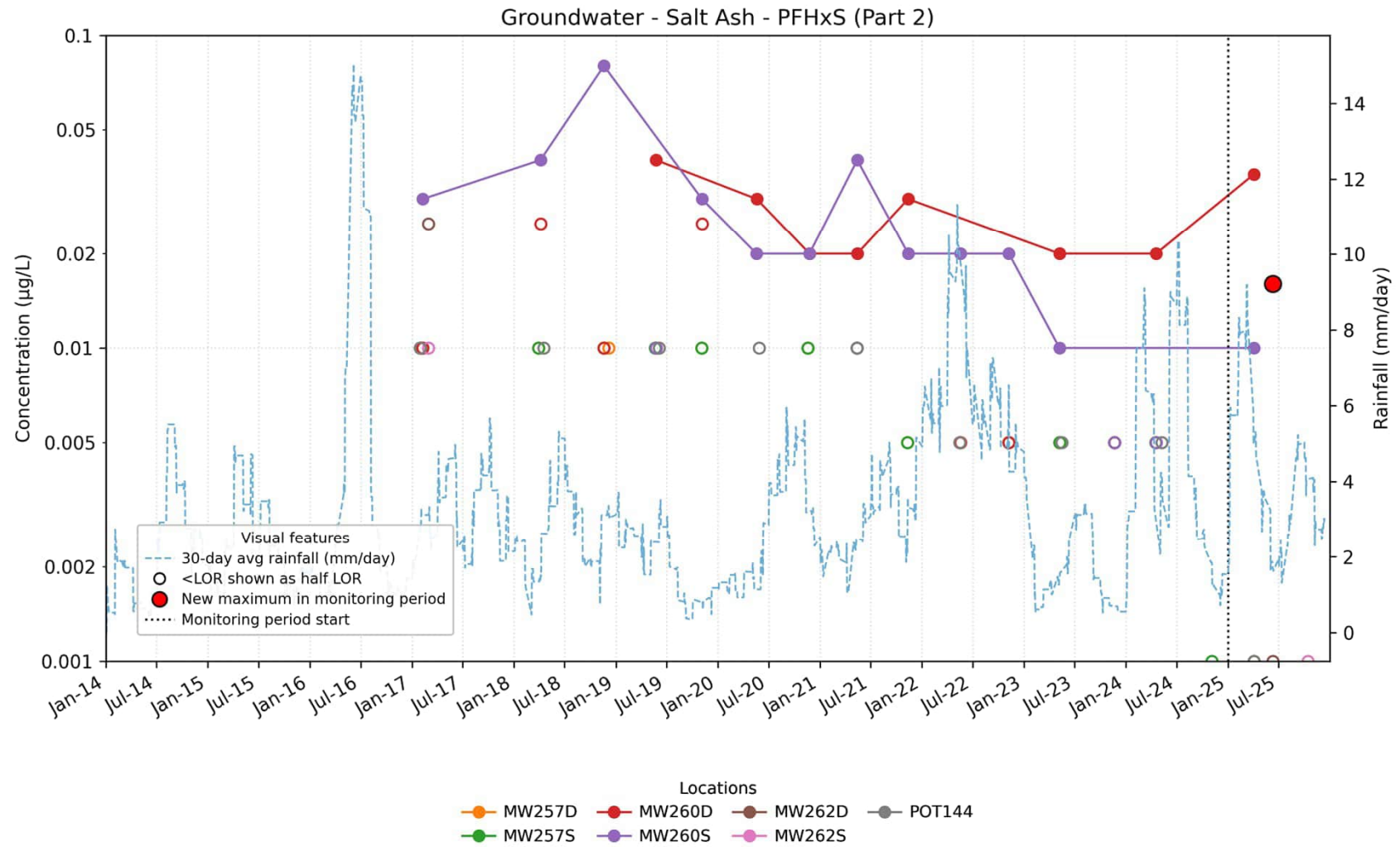
Graph G78 - Temporal Trend



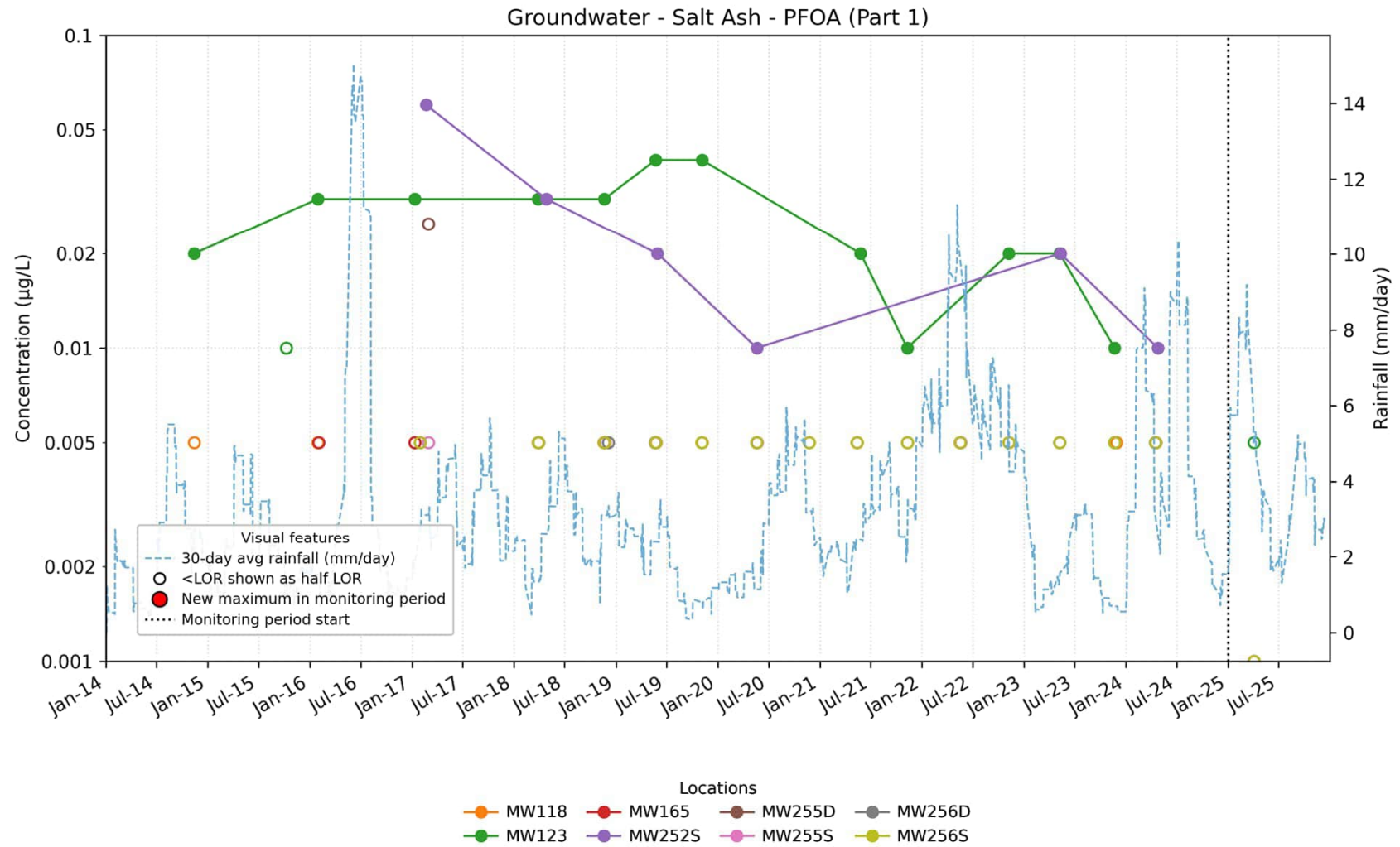
Graph G79 - Temporal Trend



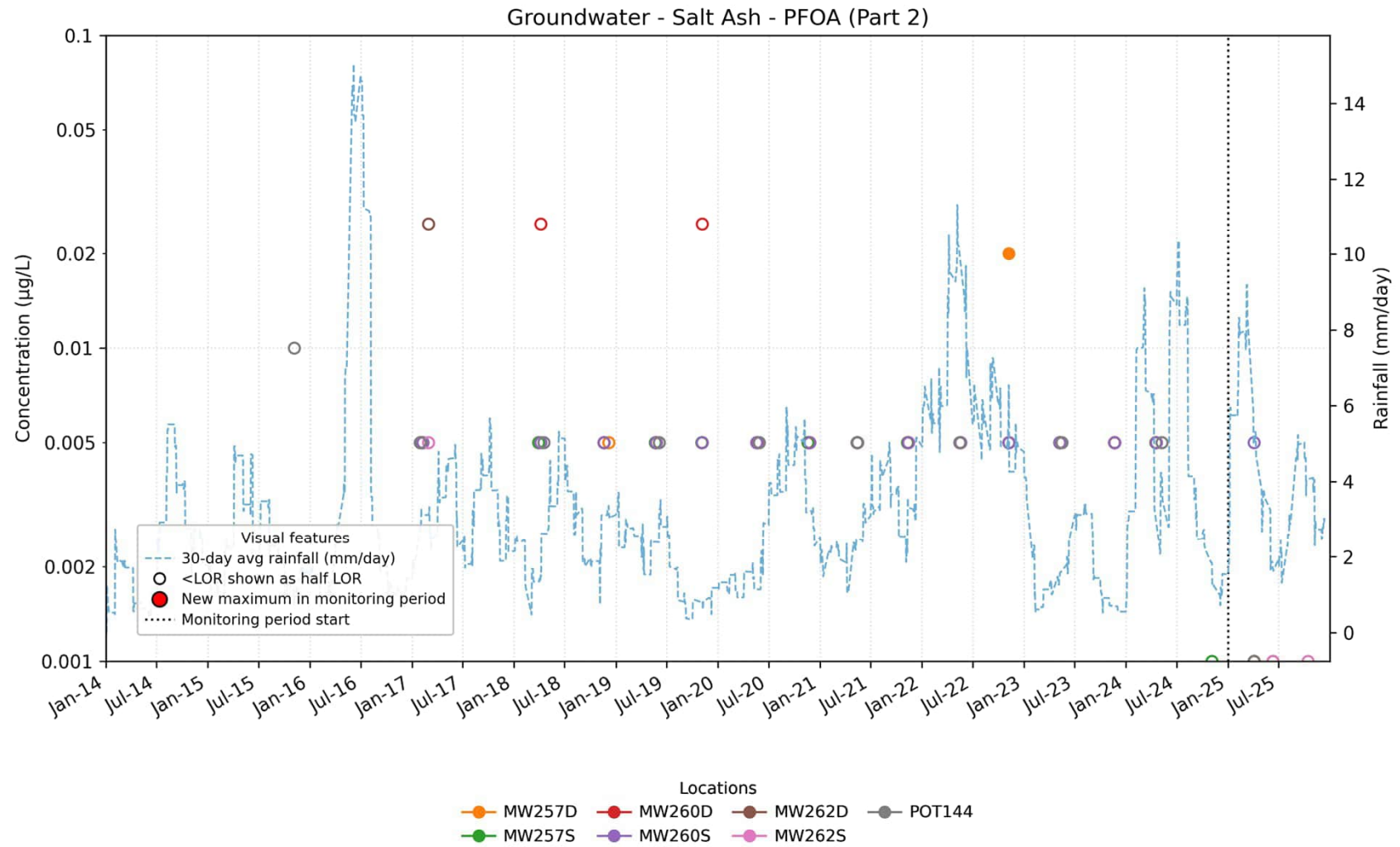
Graph G80 - Temporal Trend



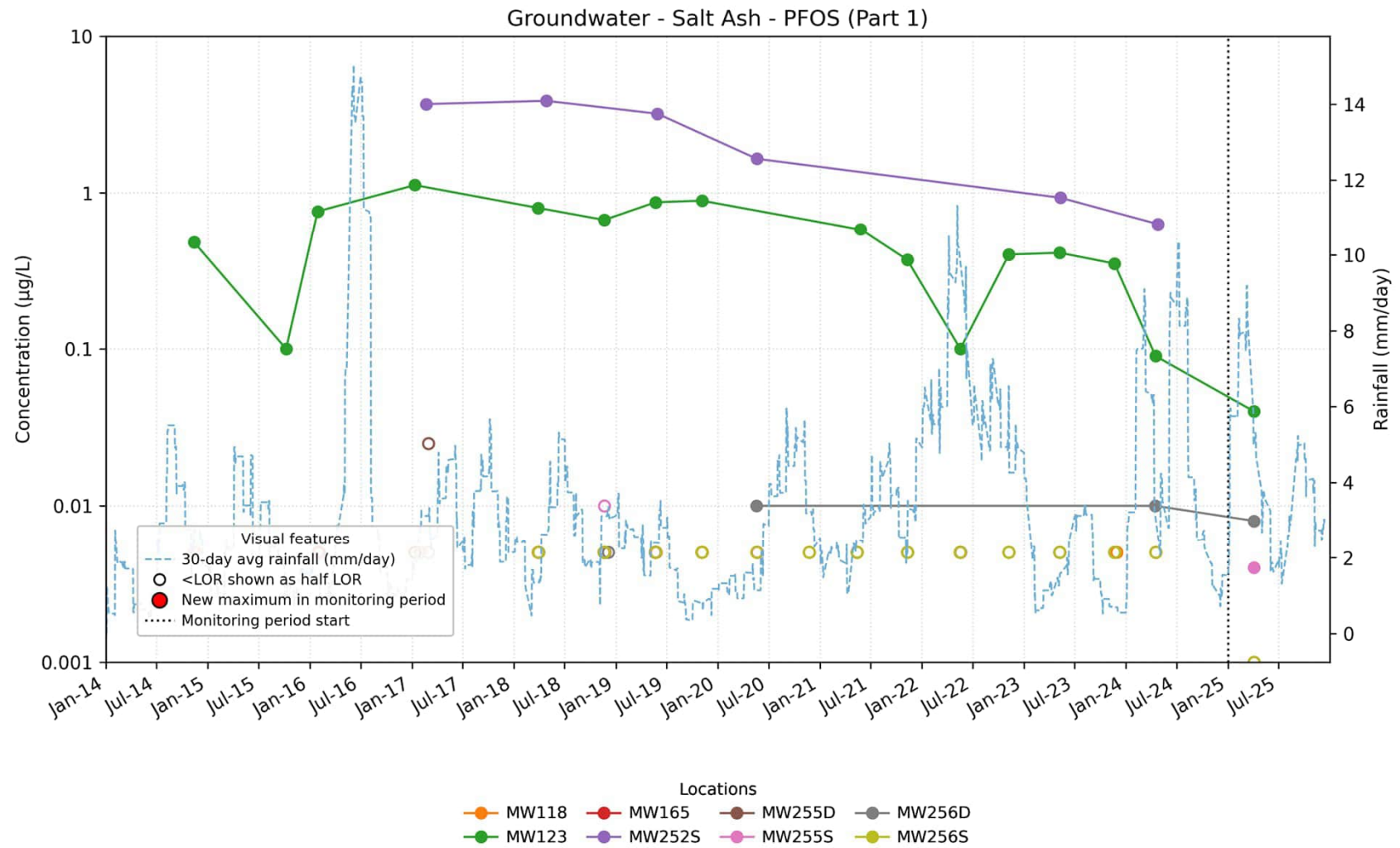
Graph G81 - Temporal Trend



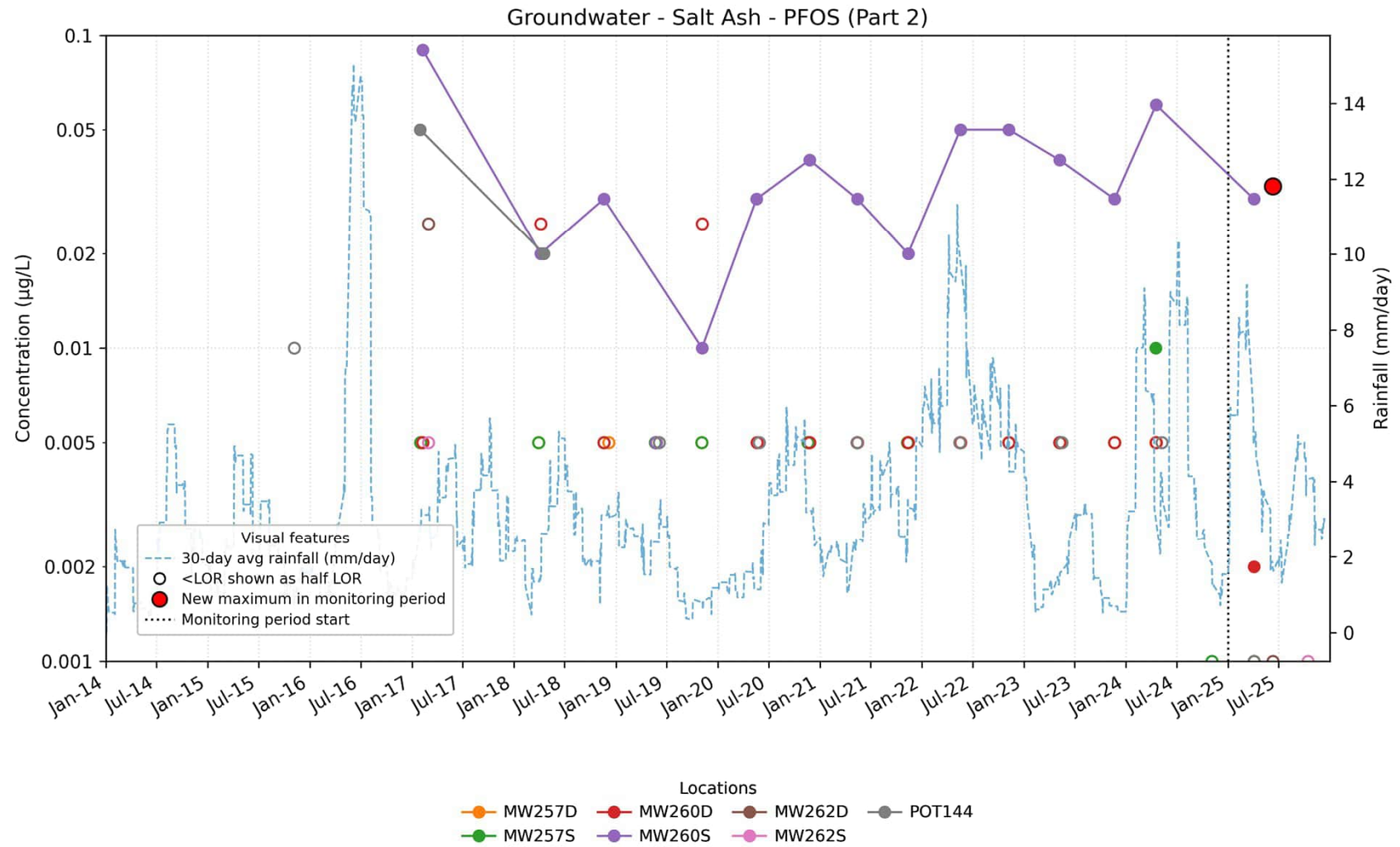
Graph G82 - Temporal Trend



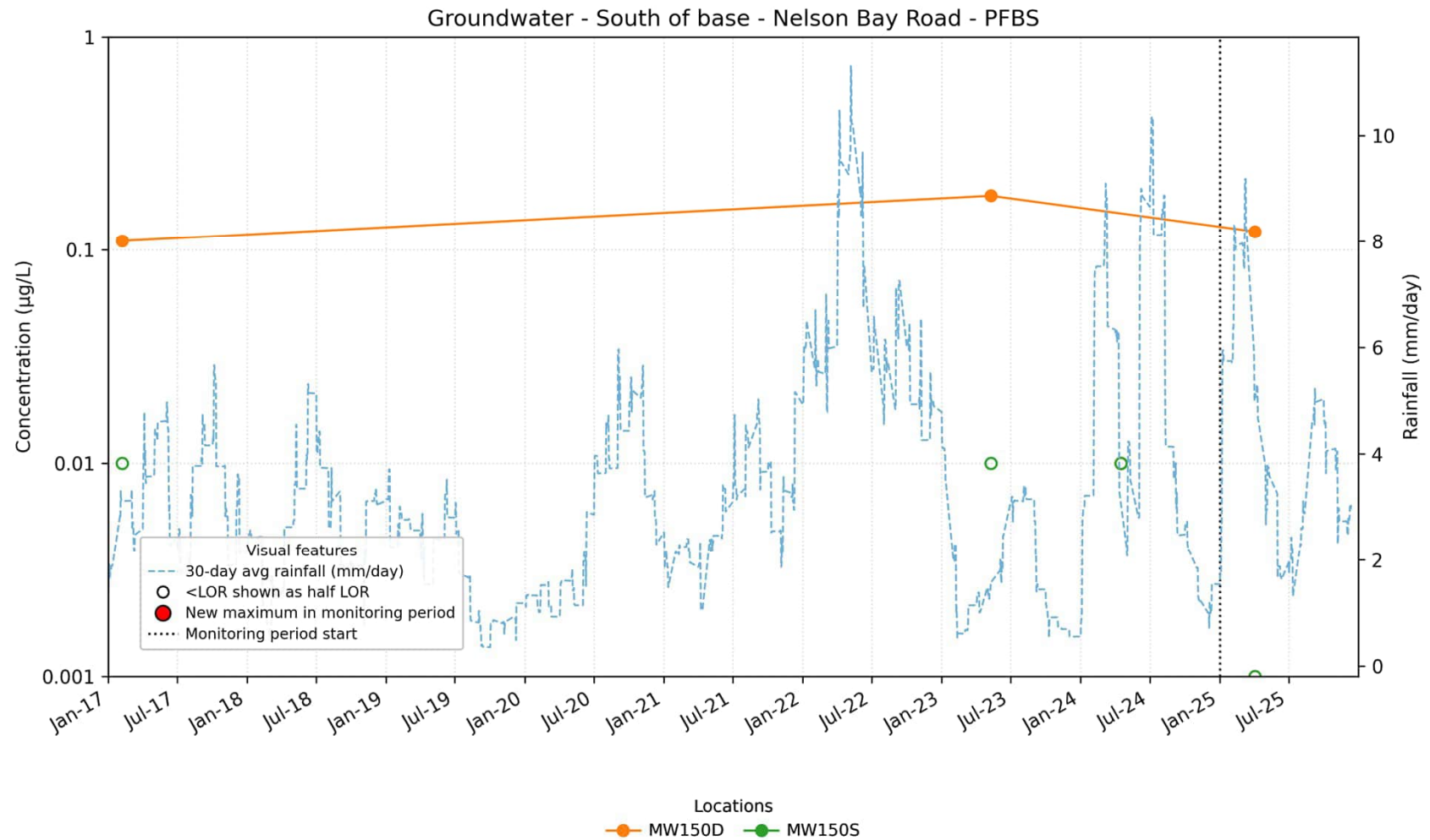
Graph G83 - Temporal Trend



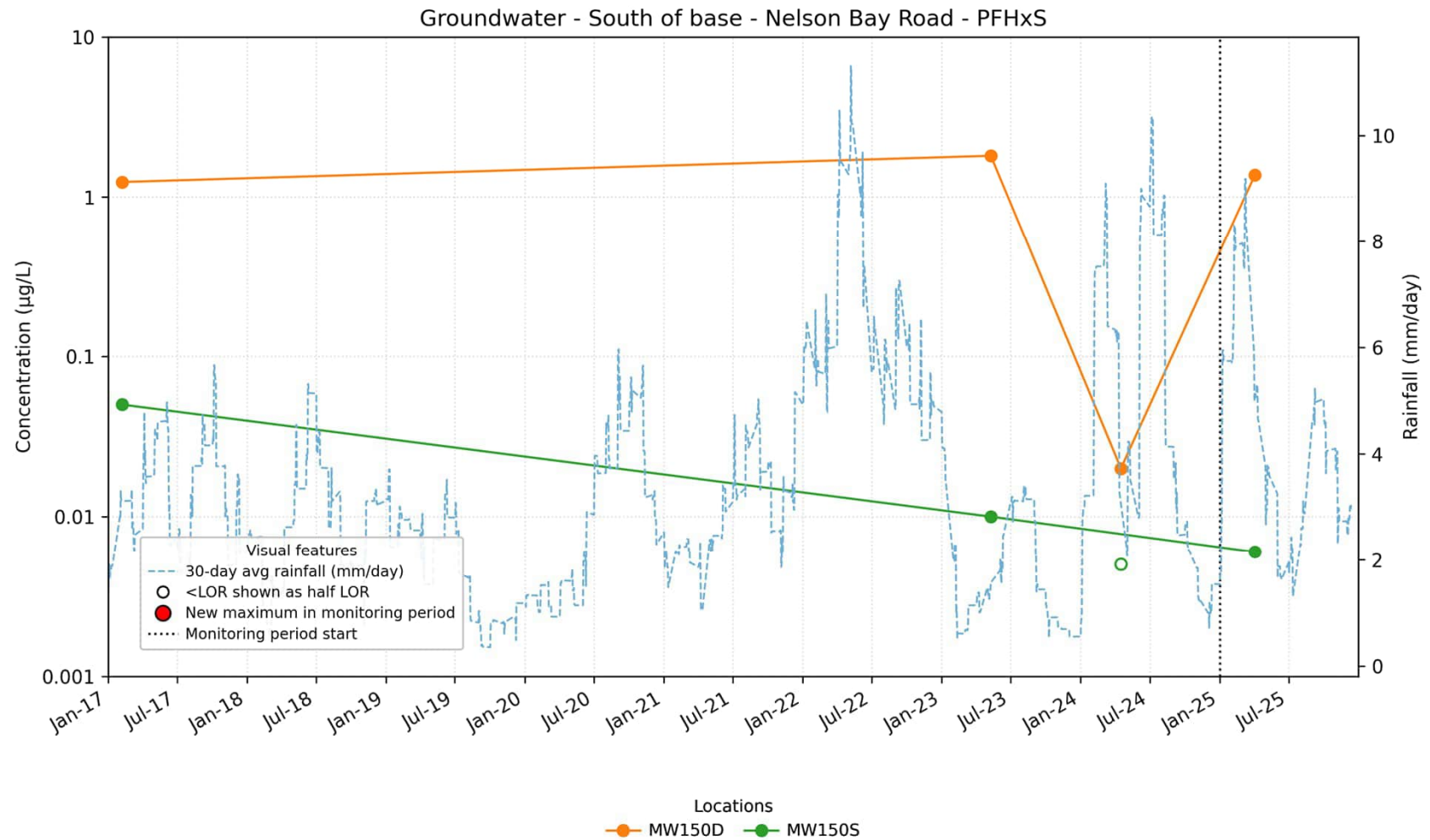
Graph G84 - Temporal Trend



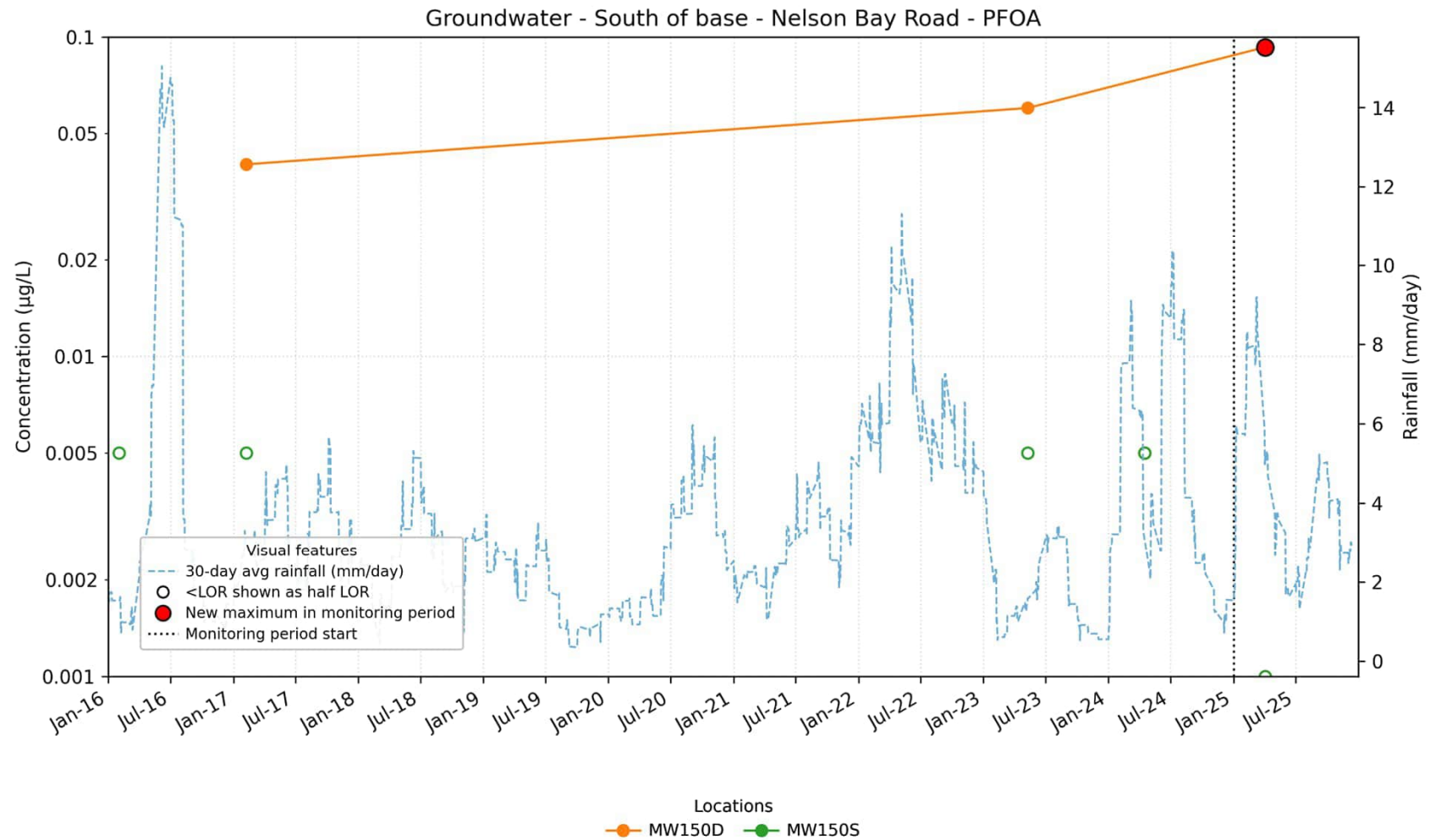
Graph G85 - Temporal Trend



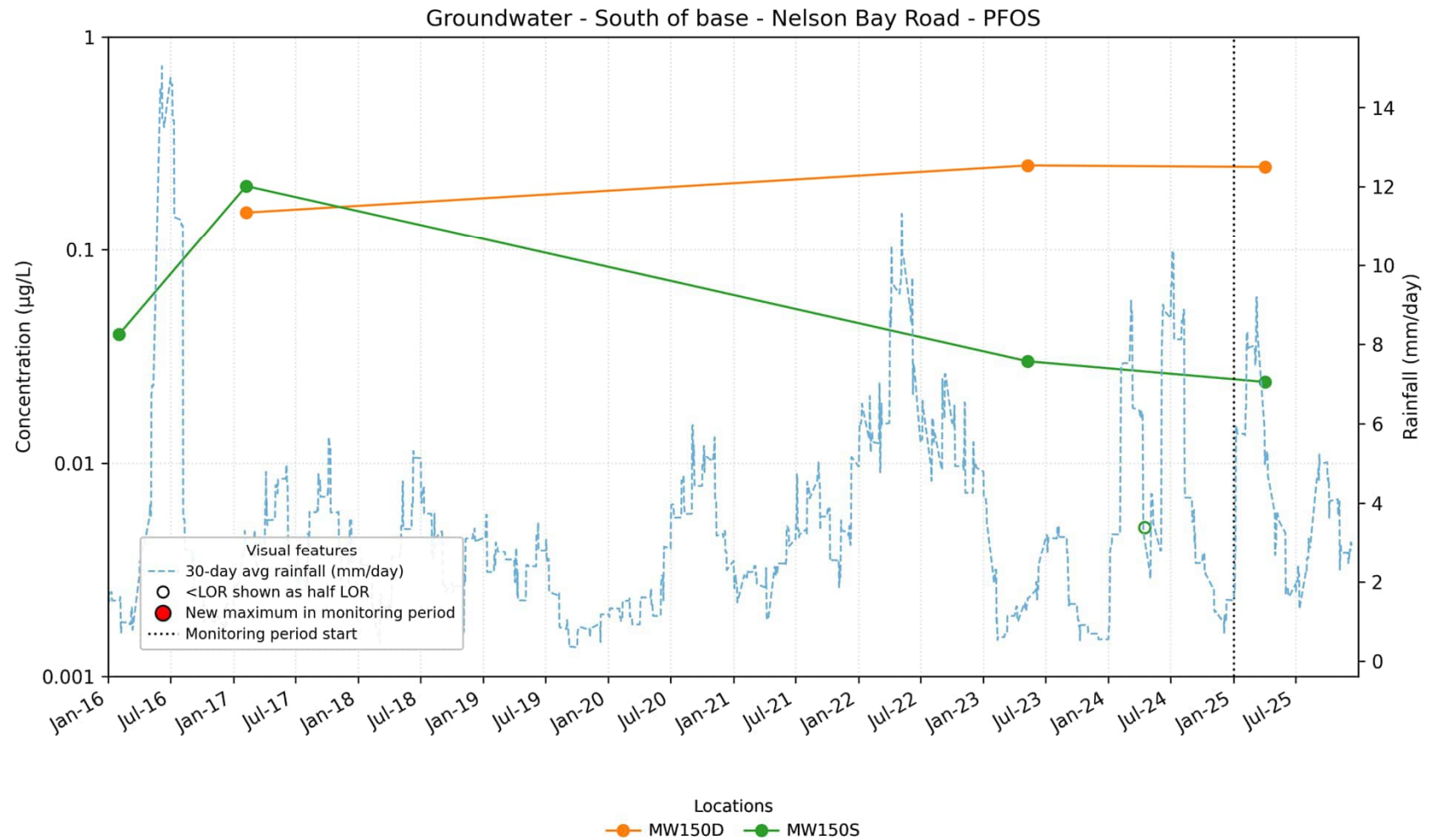
Graph G86 - Temporal Trend



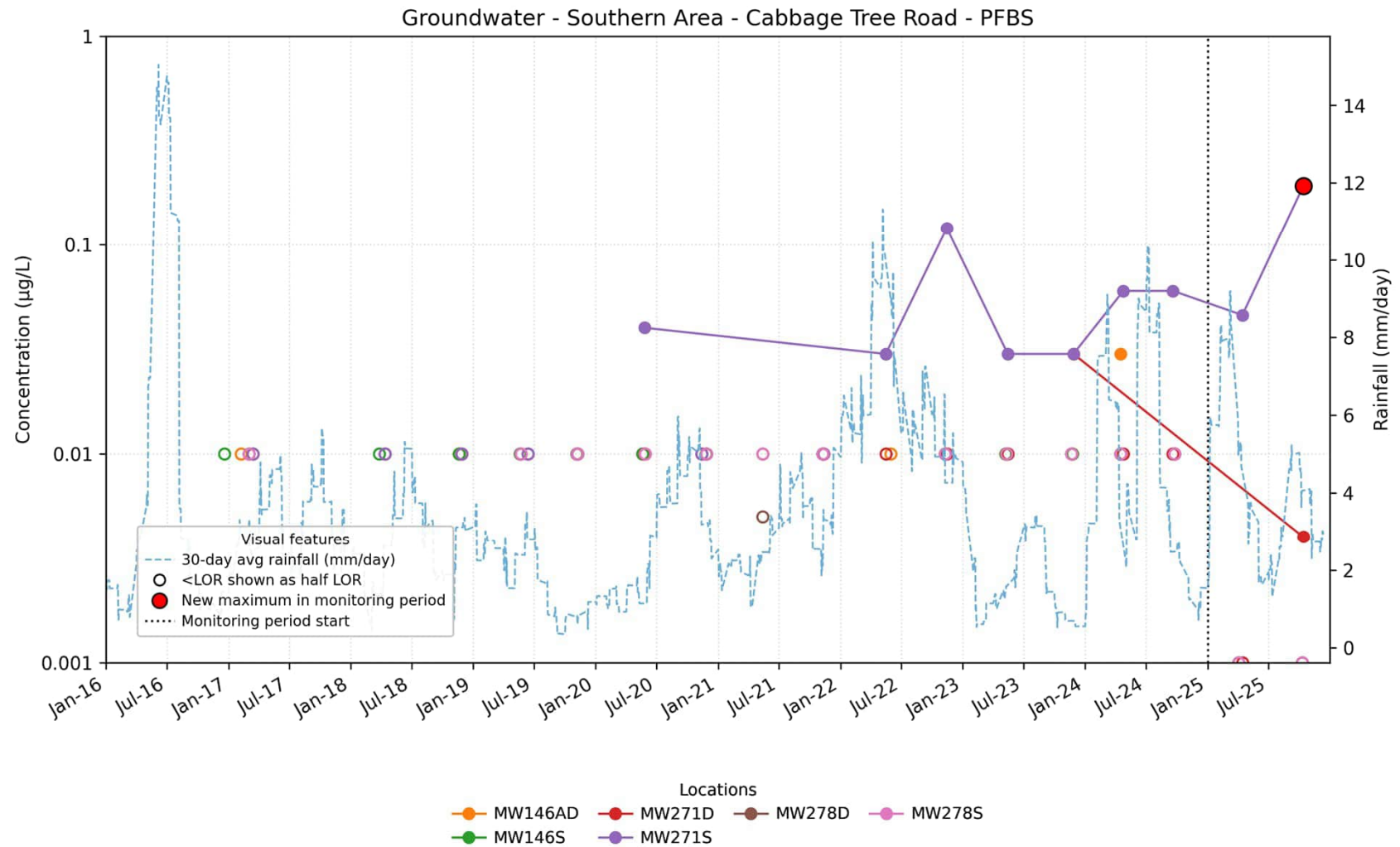
Graph G87 - Temporal Trend



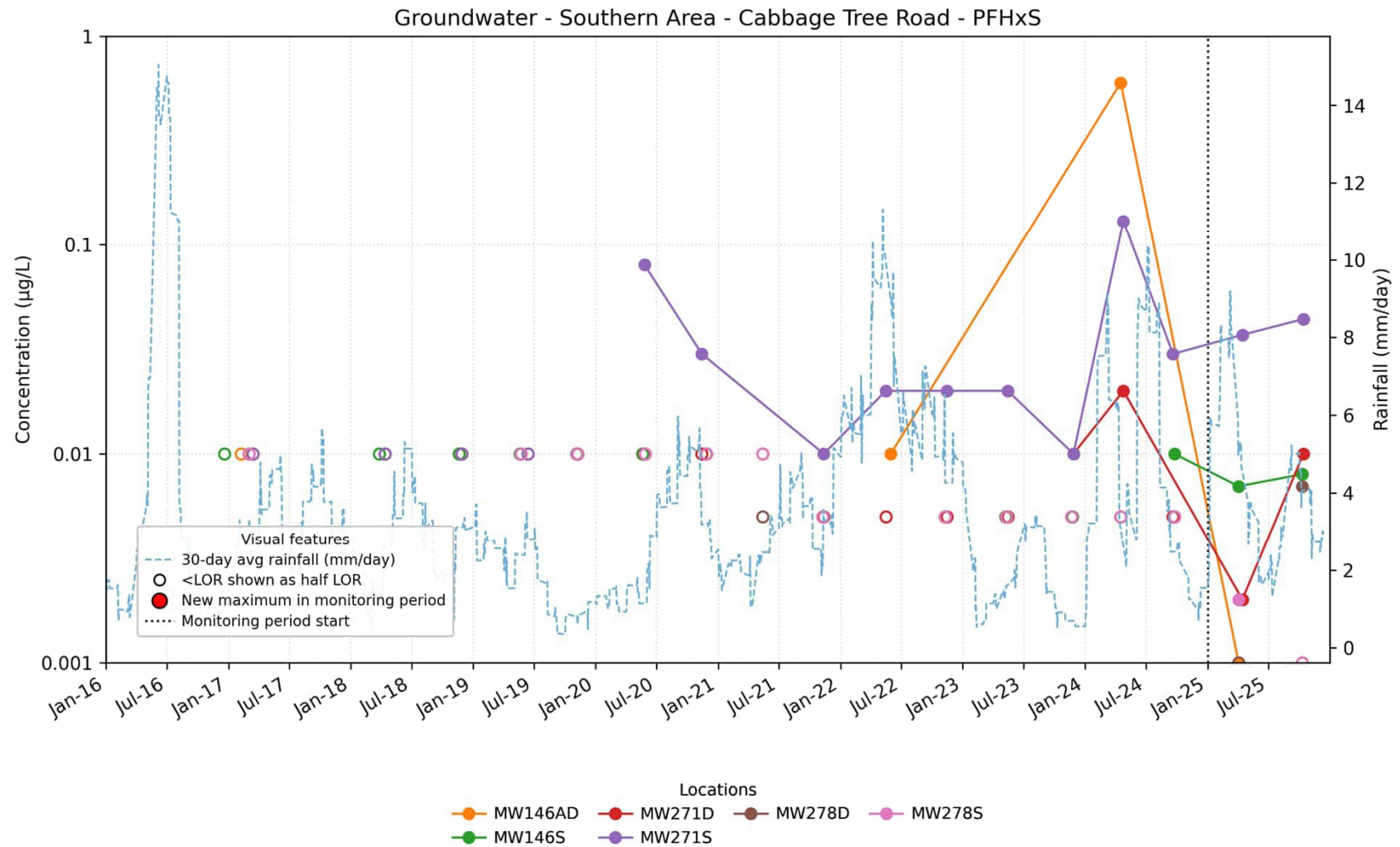
Graph G88 - Temporal Trend



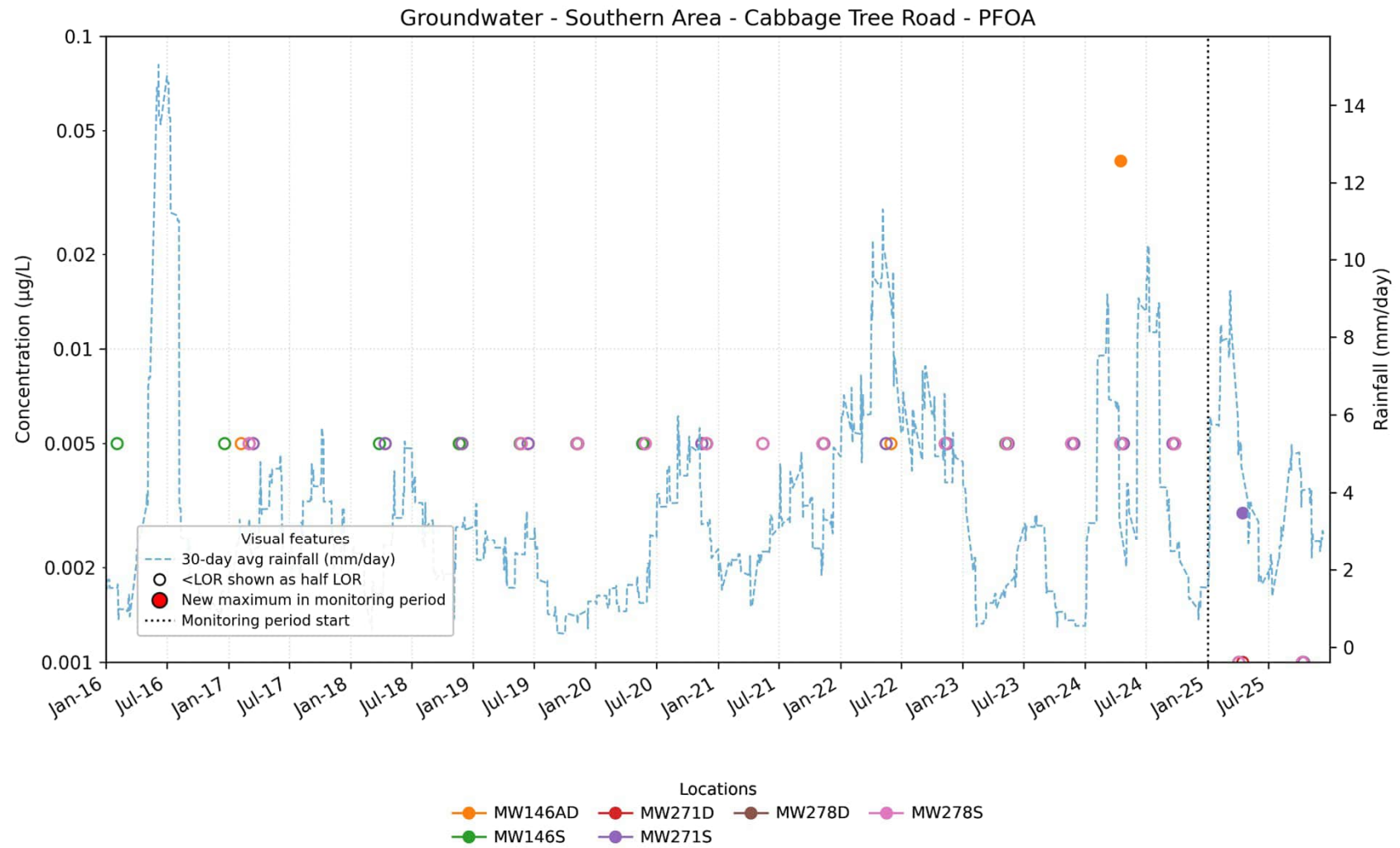
Graph G89 - Temporal Trend



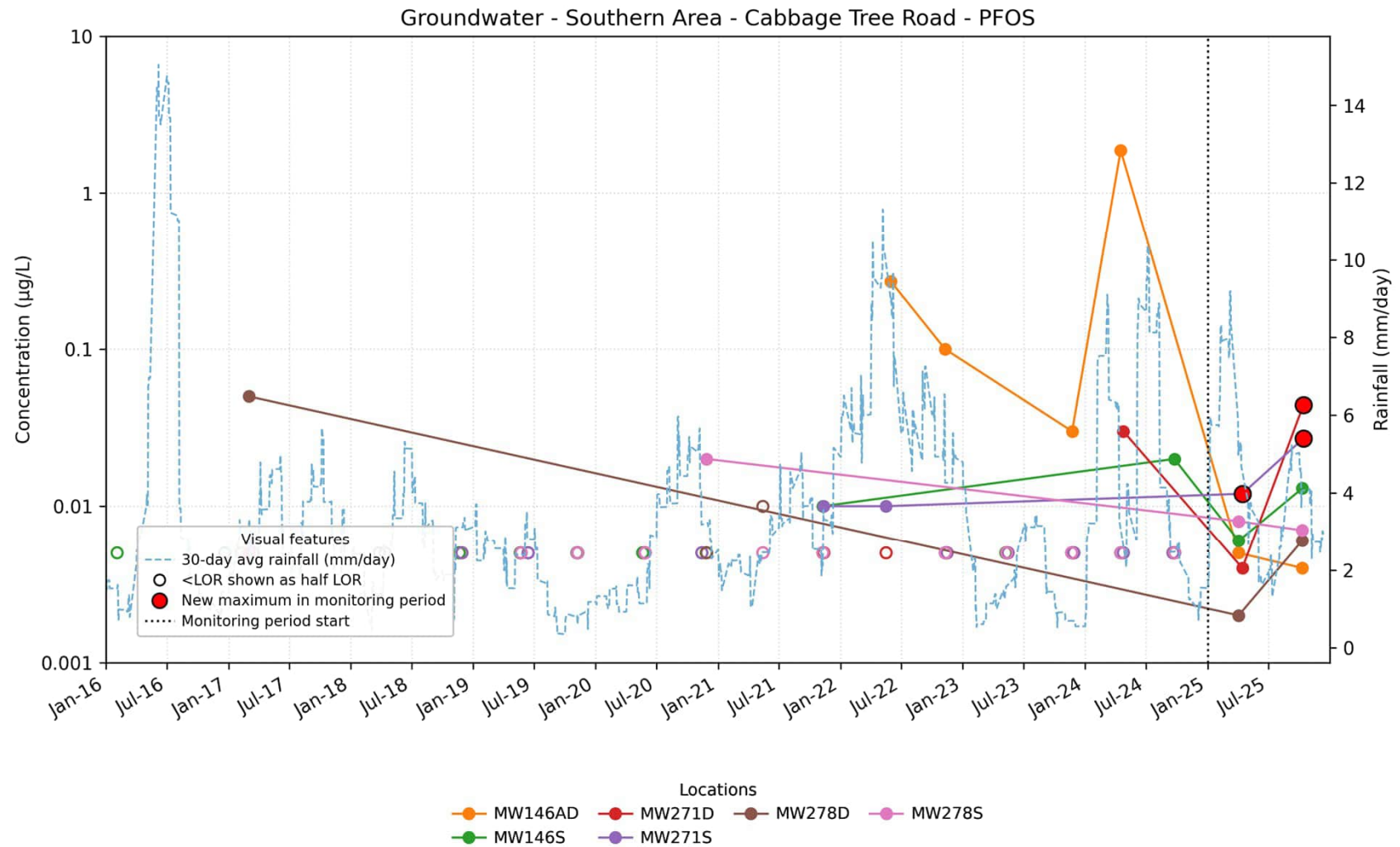
Graph G90 - Temporal Trend



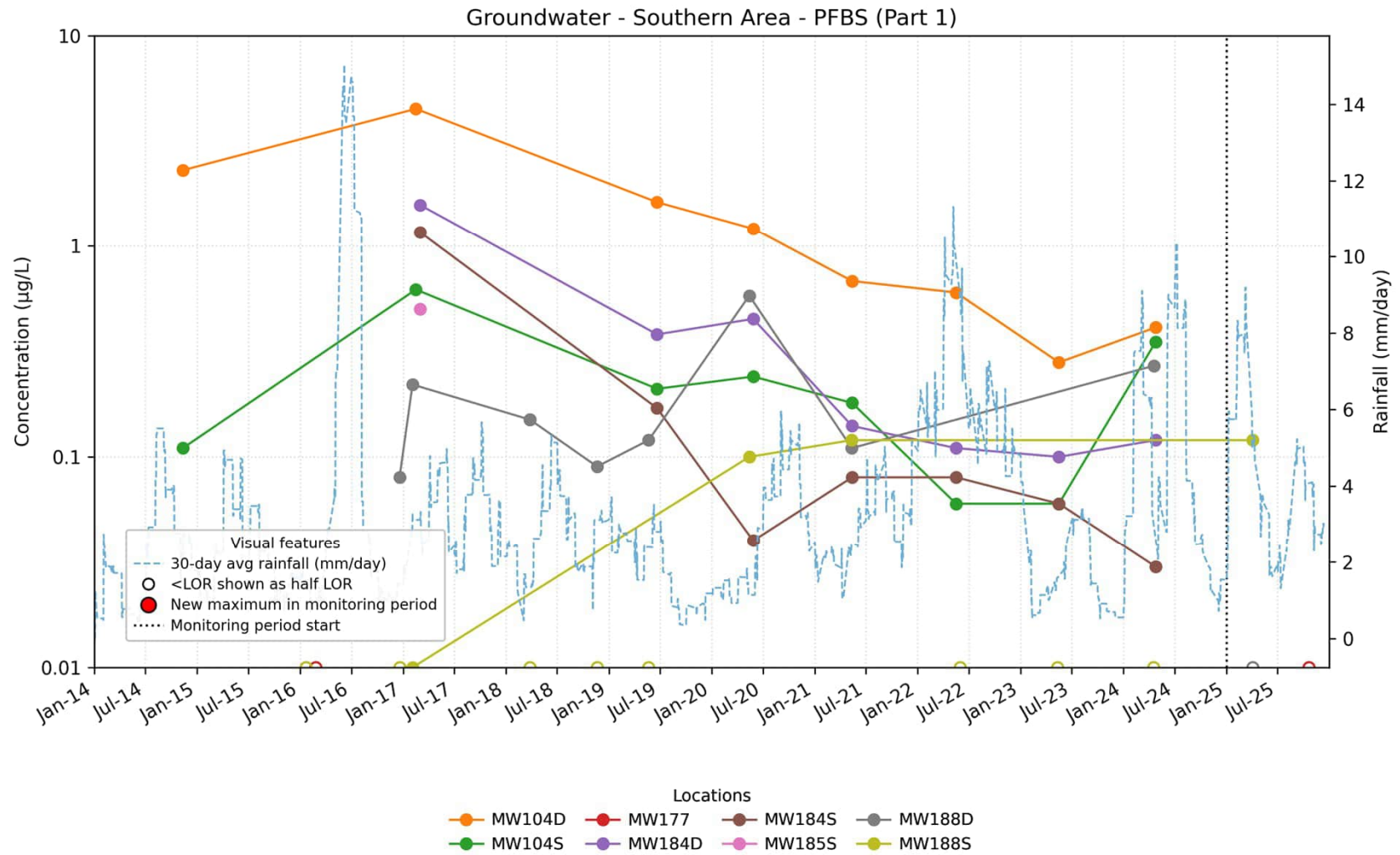
Graph G91 - Temporal Trend



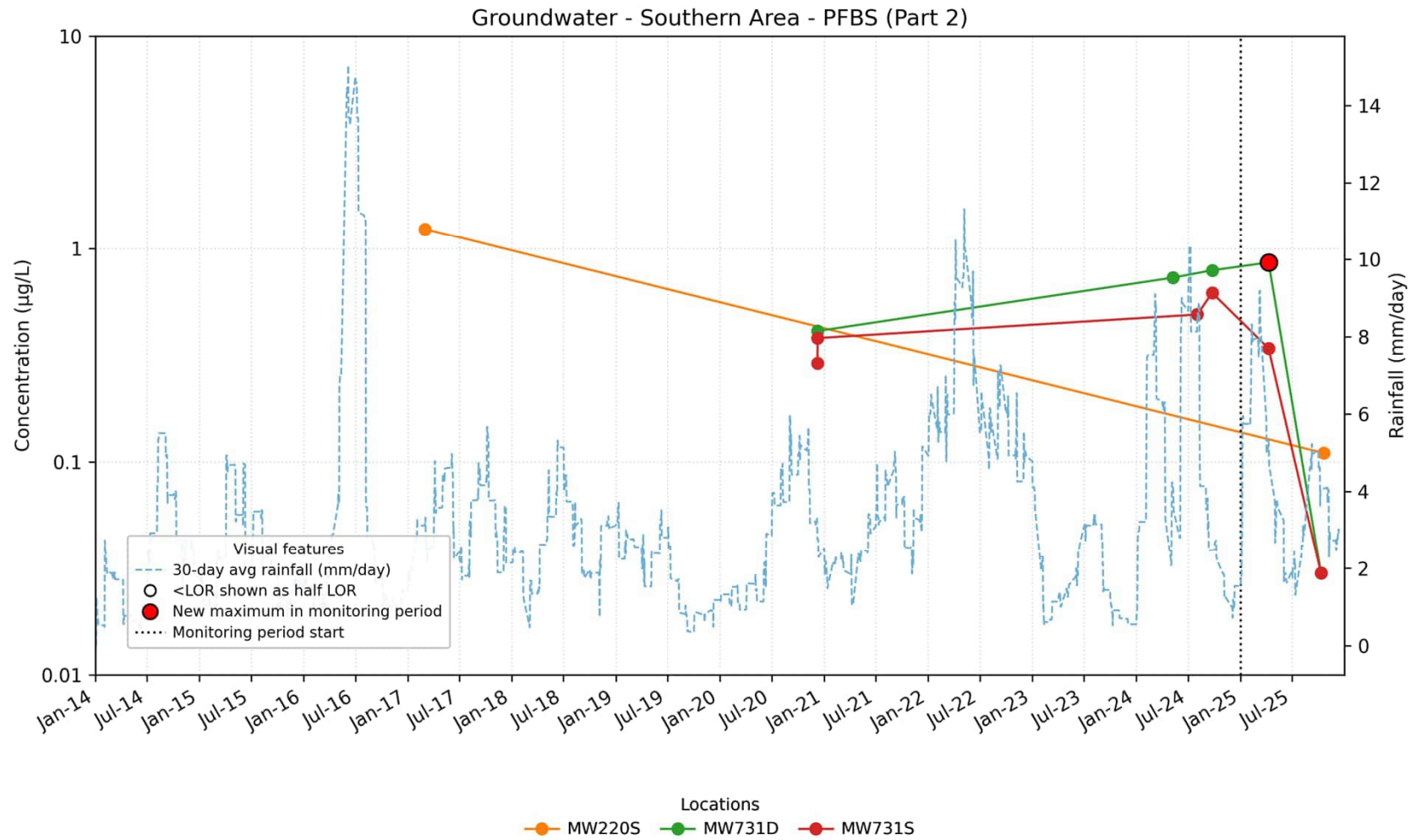
Graph G92 - Temporal Trend



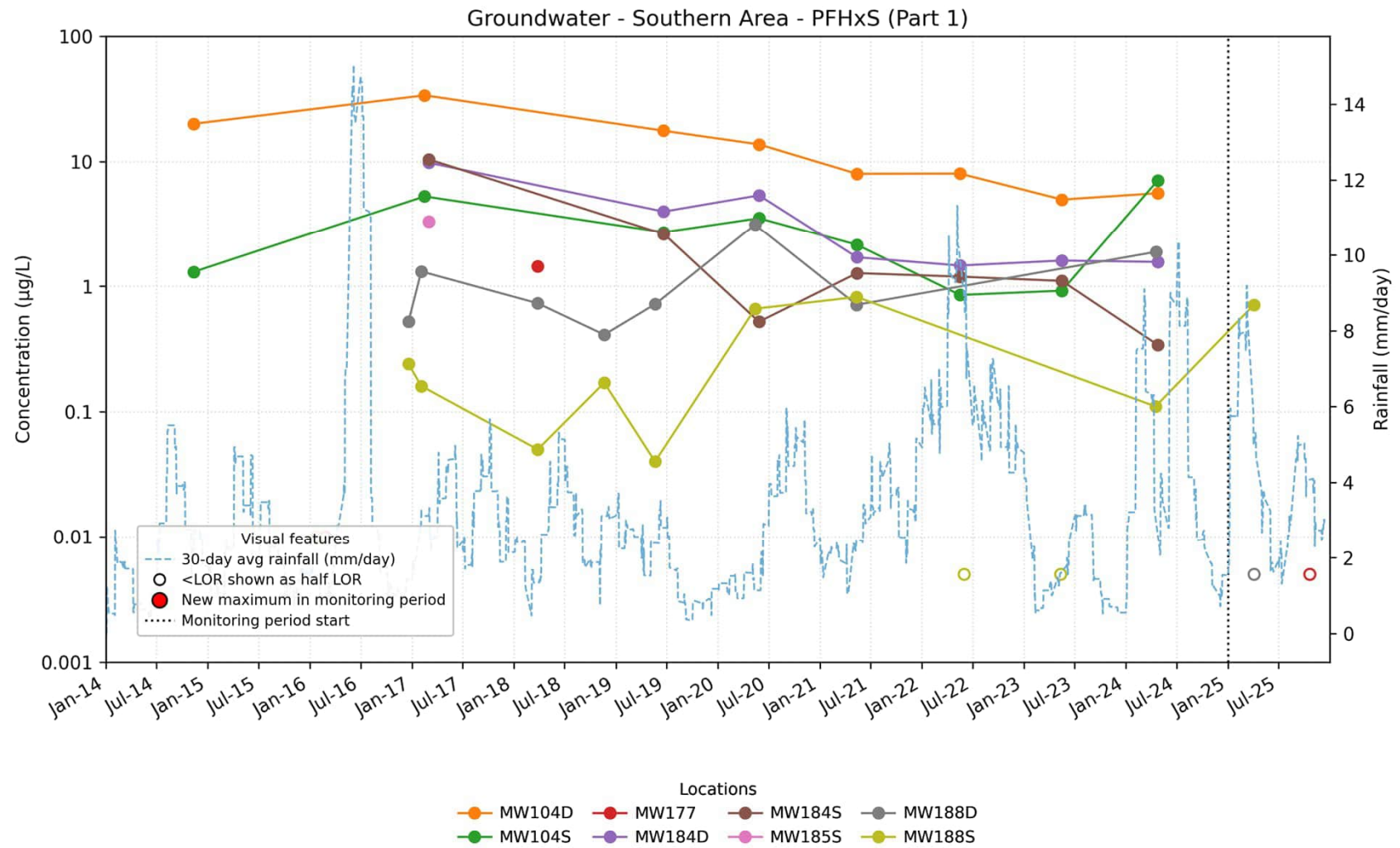
Graph G93 - Temporal Trend



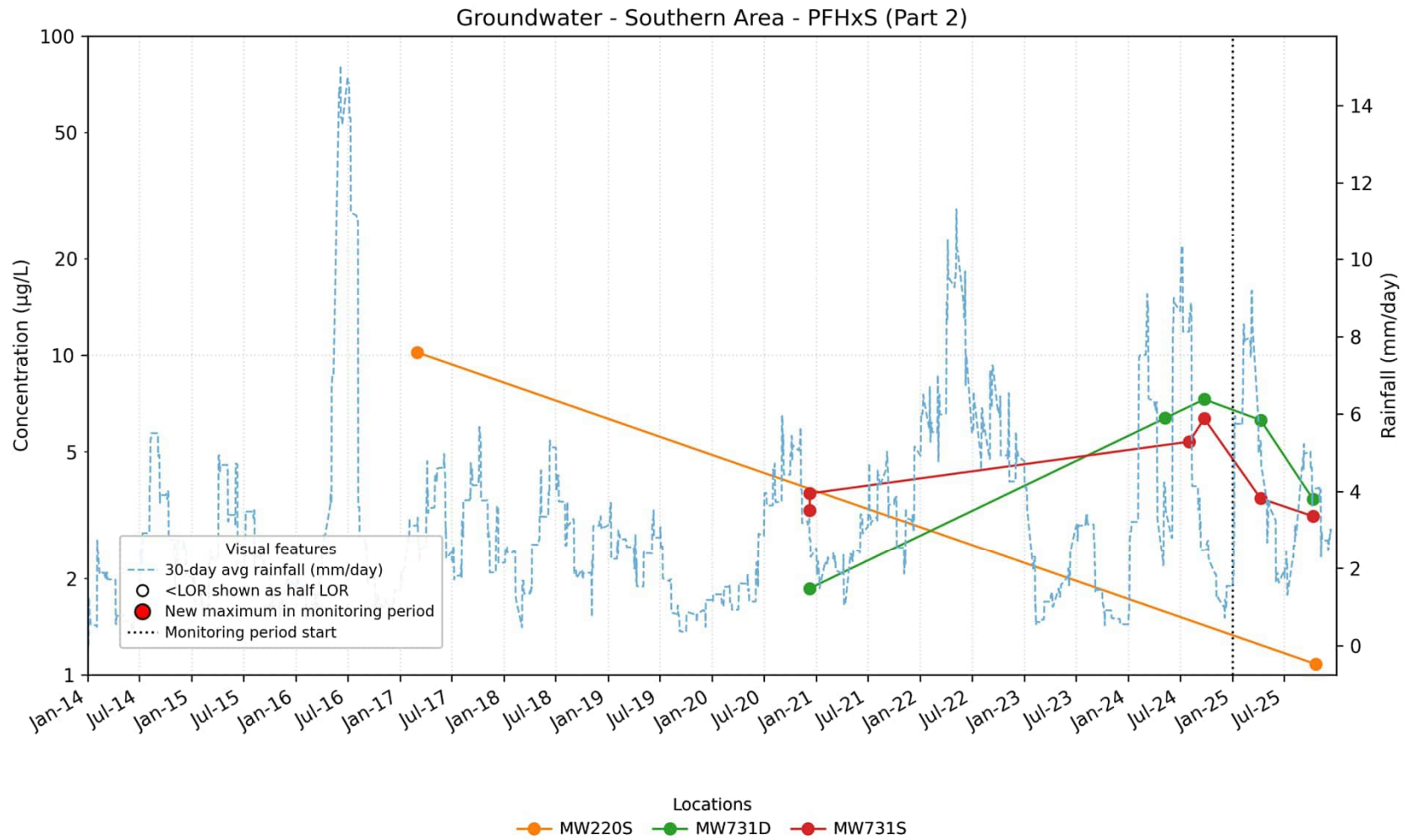
Graph G94 - Temporal Trend



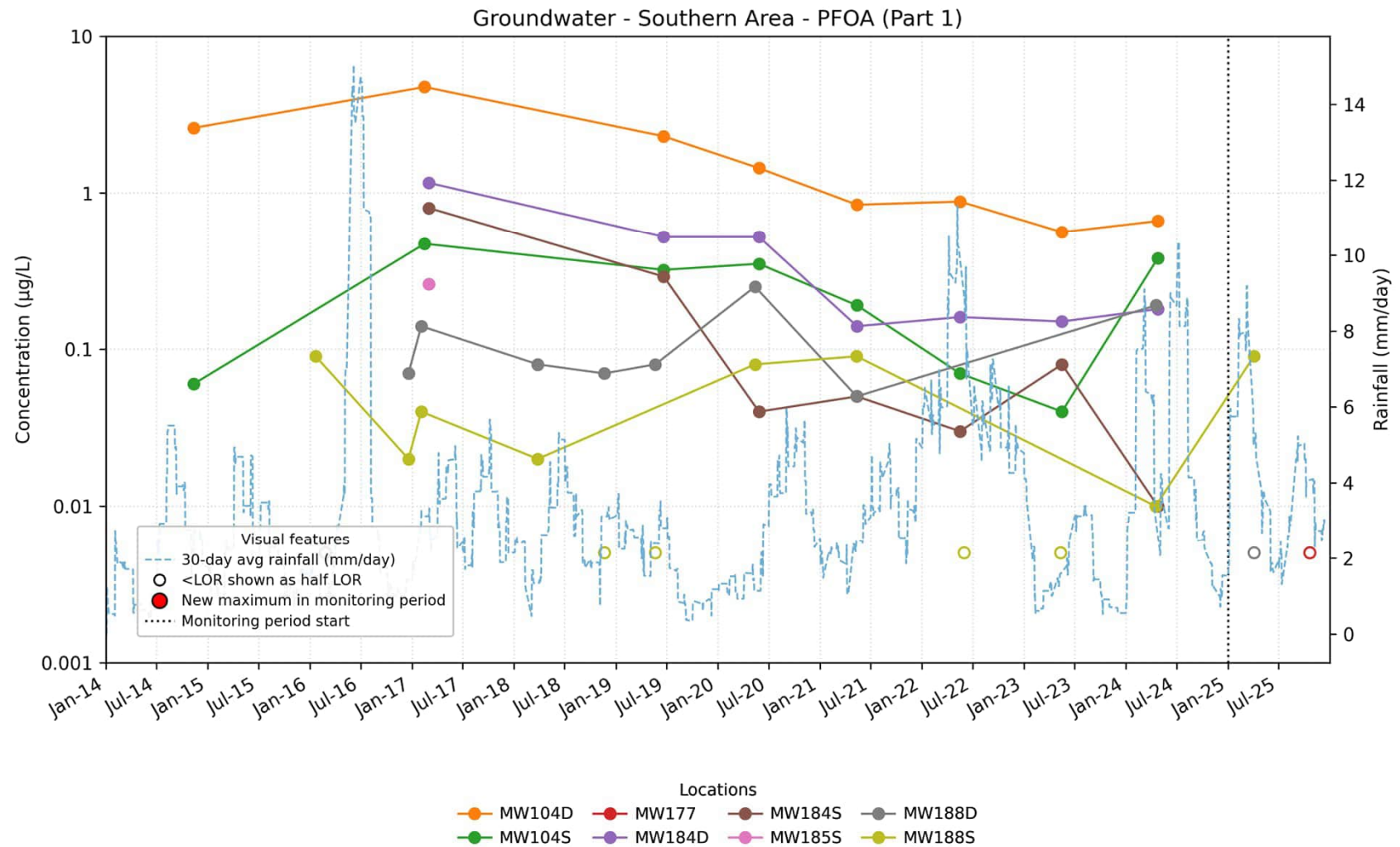
Graph G95 - Temporal Trend



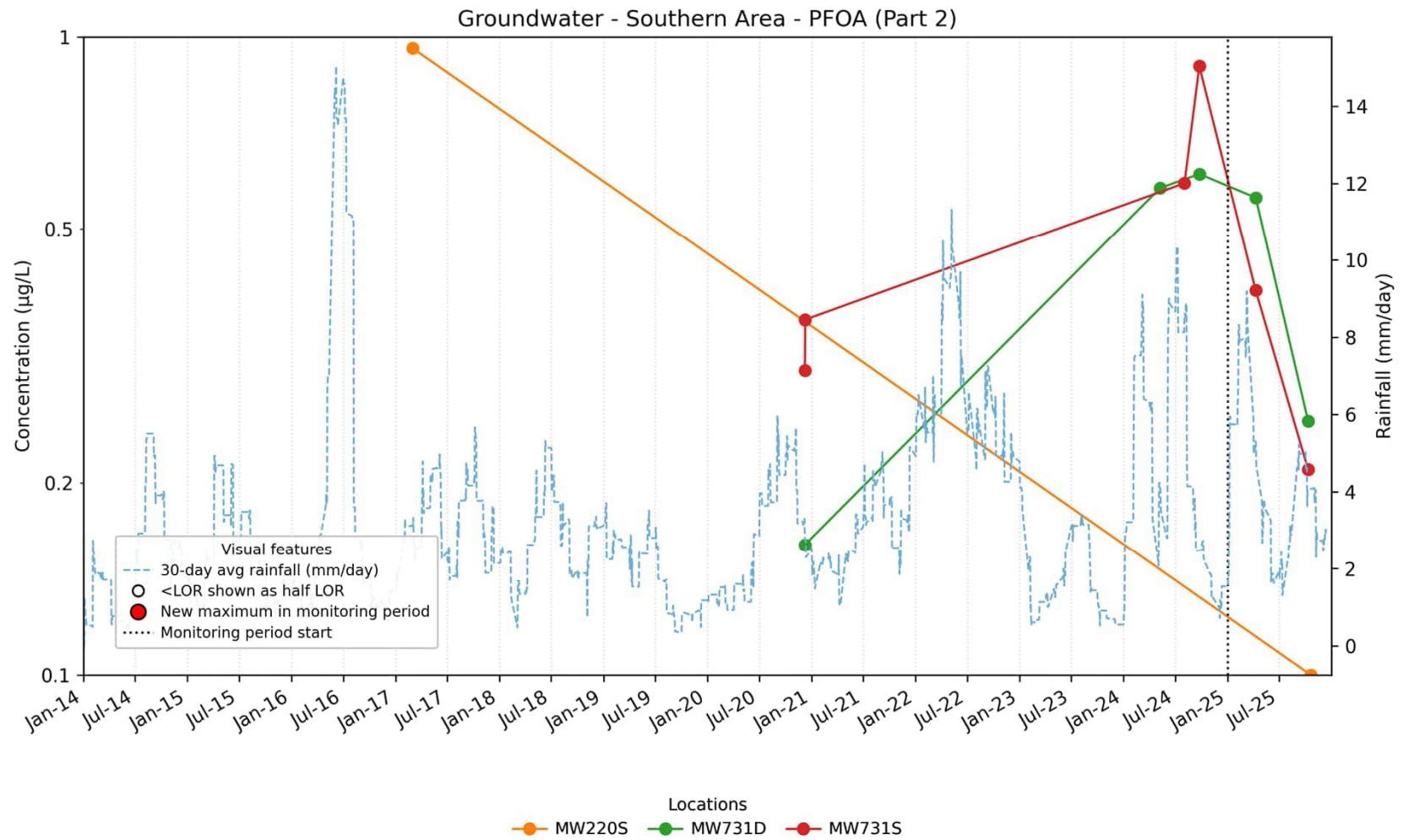
Graph G96 - Temporal Trend



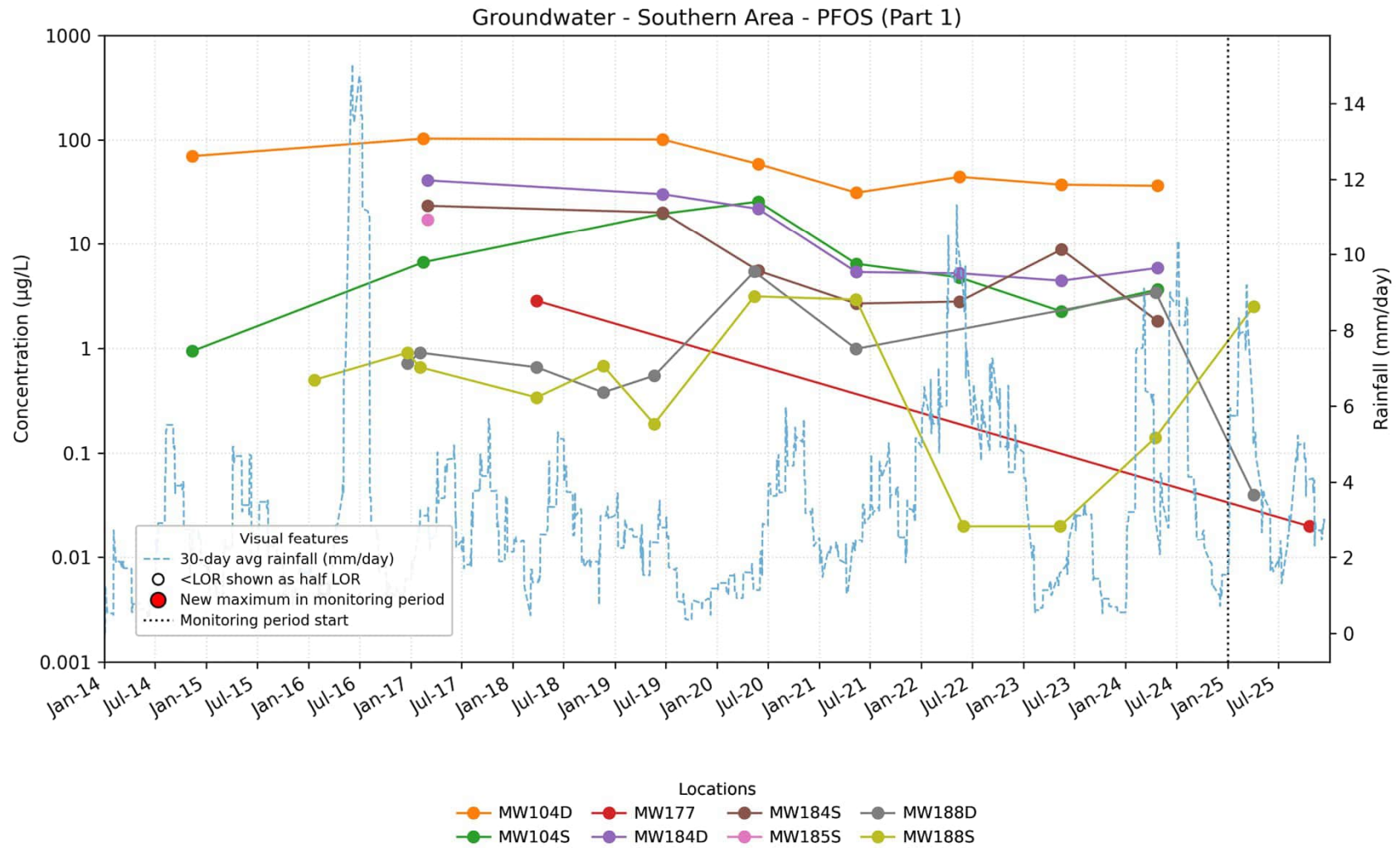
Graph G97 - Temporal Trend



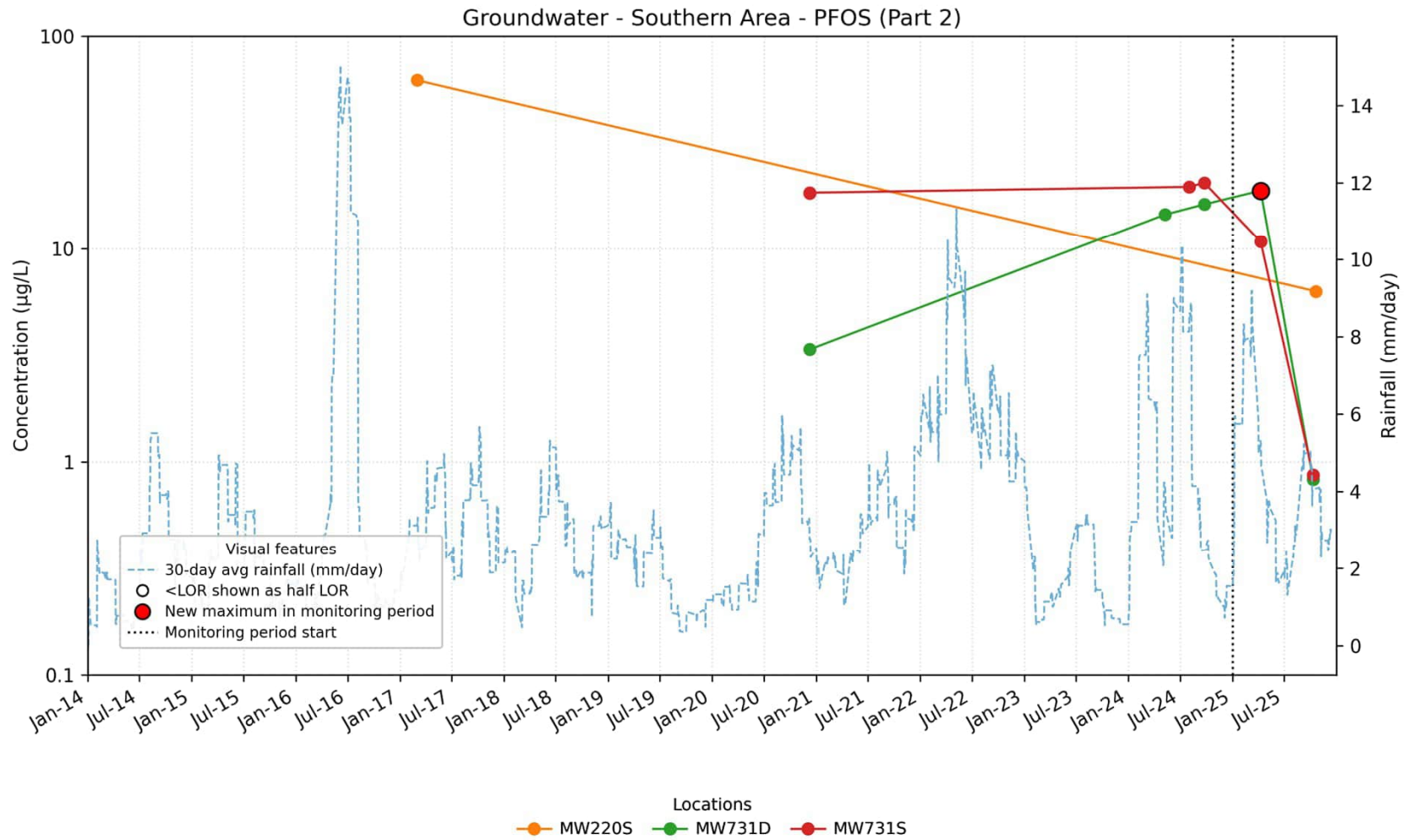
Graph G98 - Temporal Trend



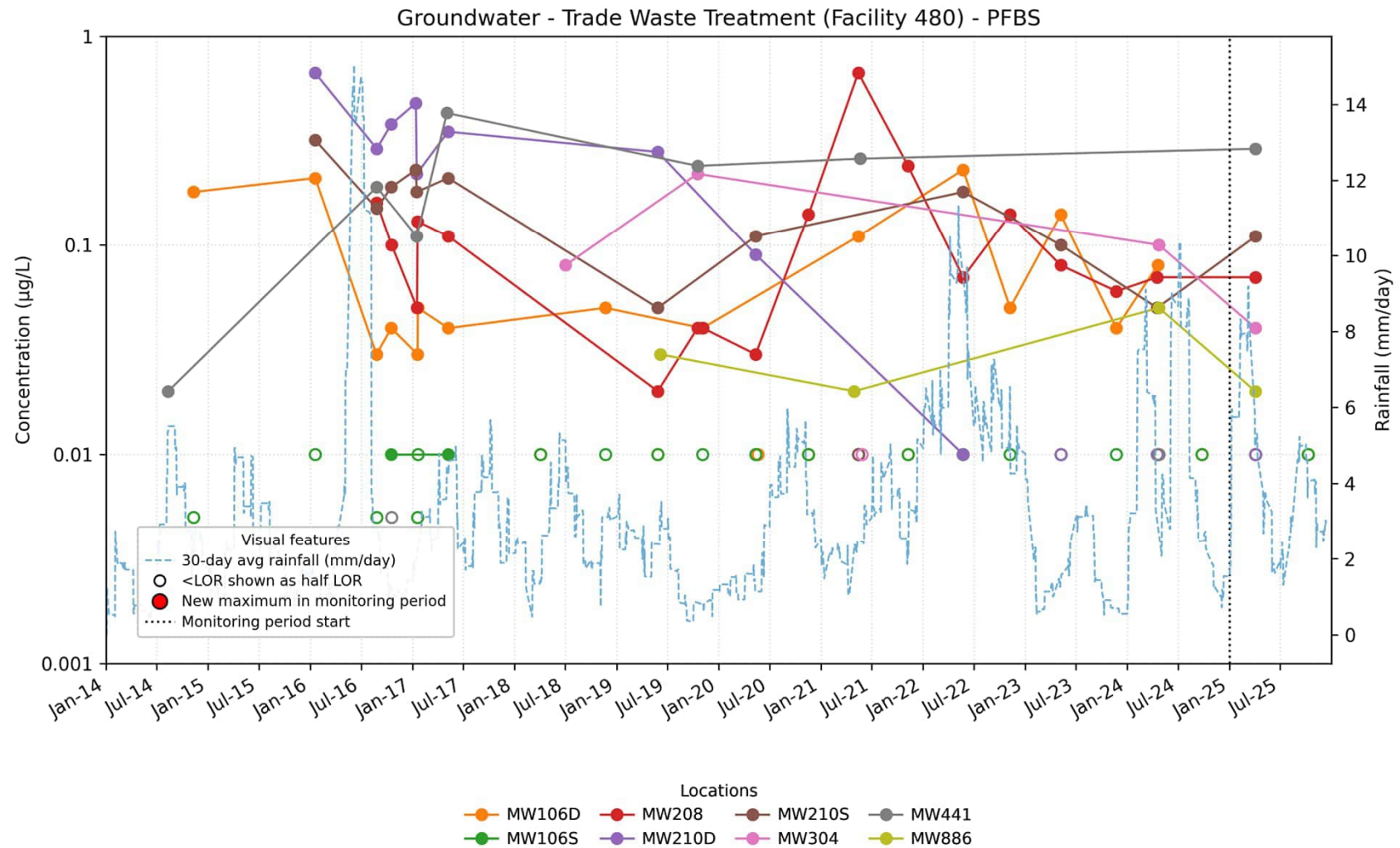
Graph G99 - Temporal Trend



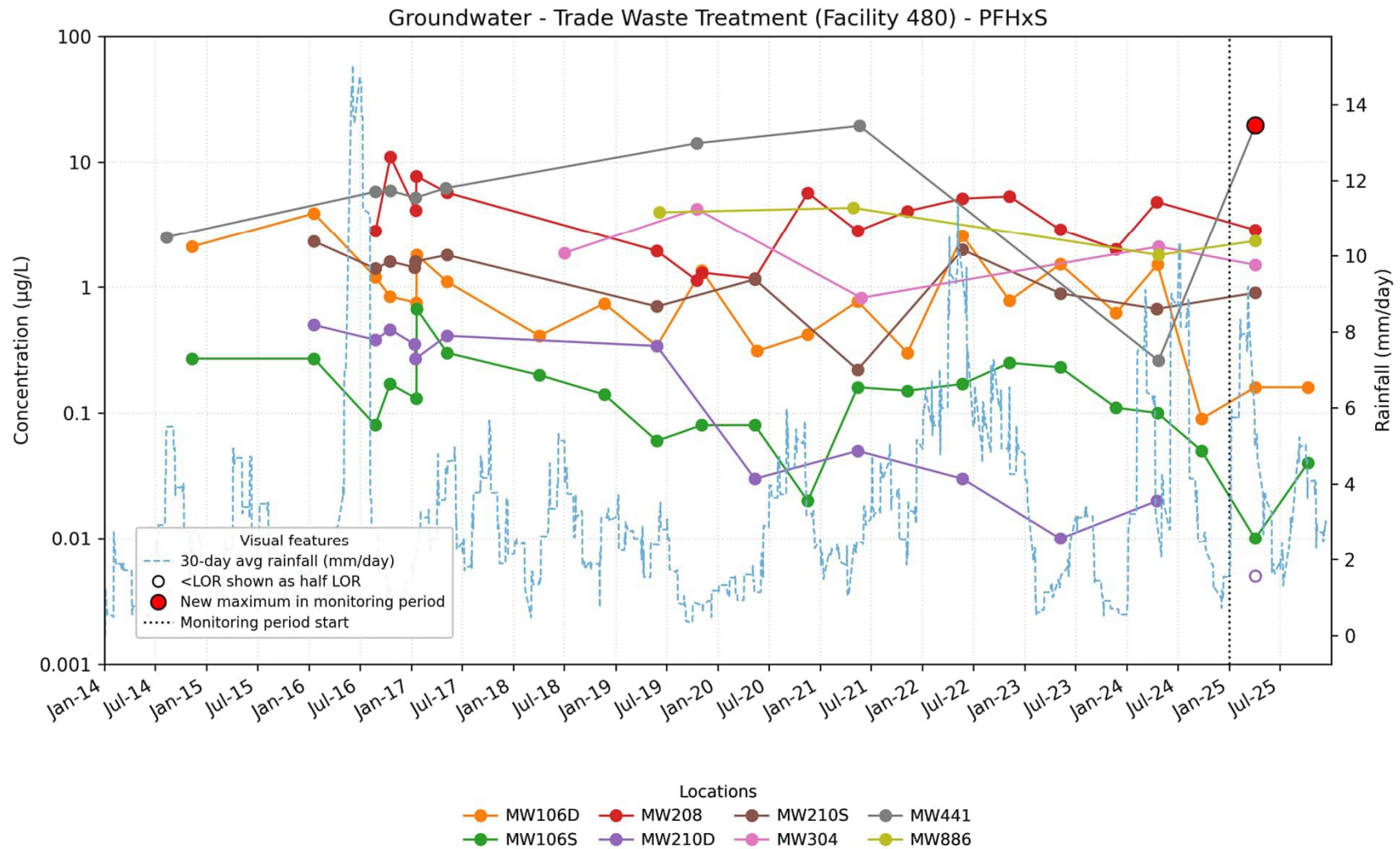
Graph G100 - Temporal Trend



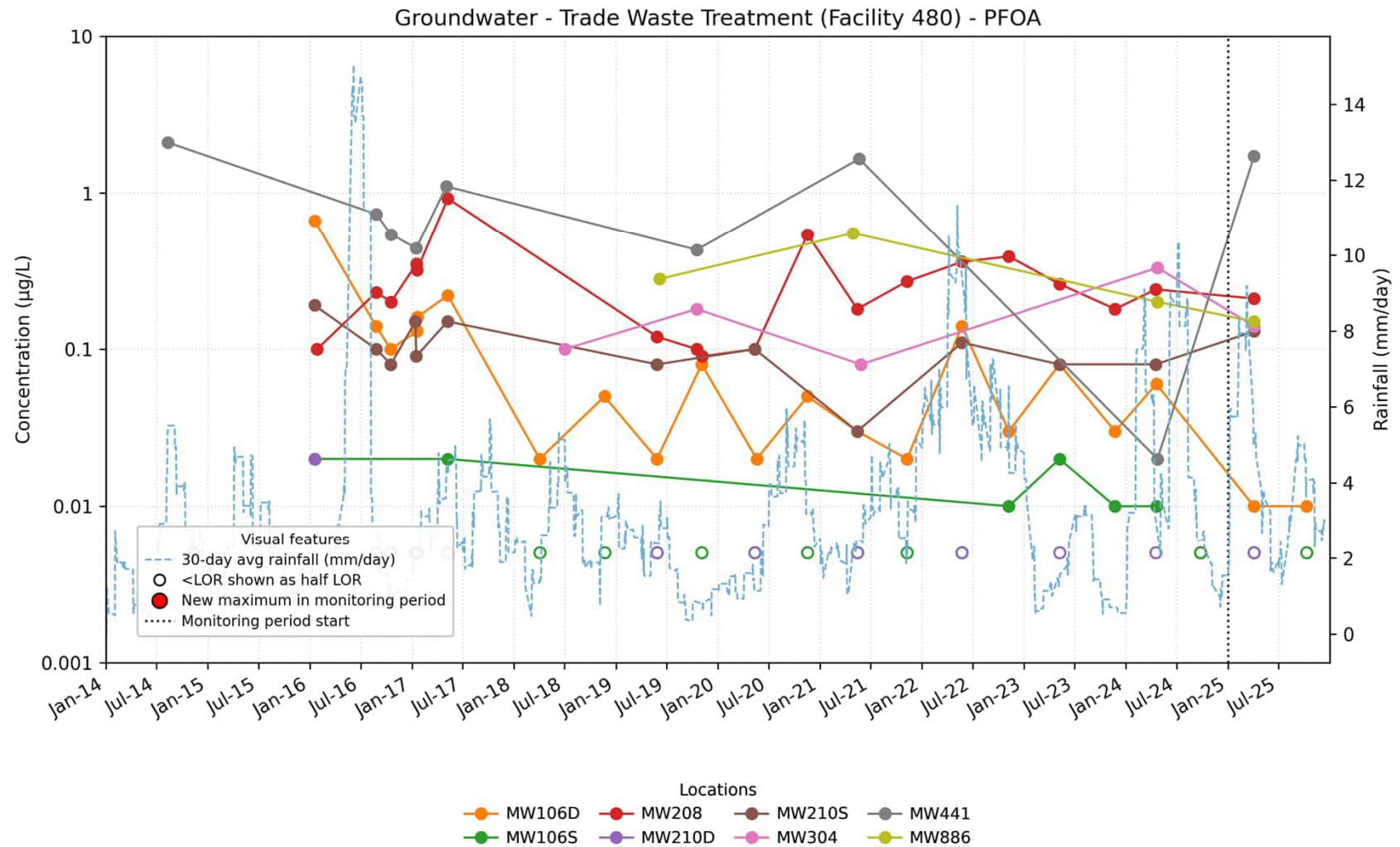
Graph G101 - Temporal Trend



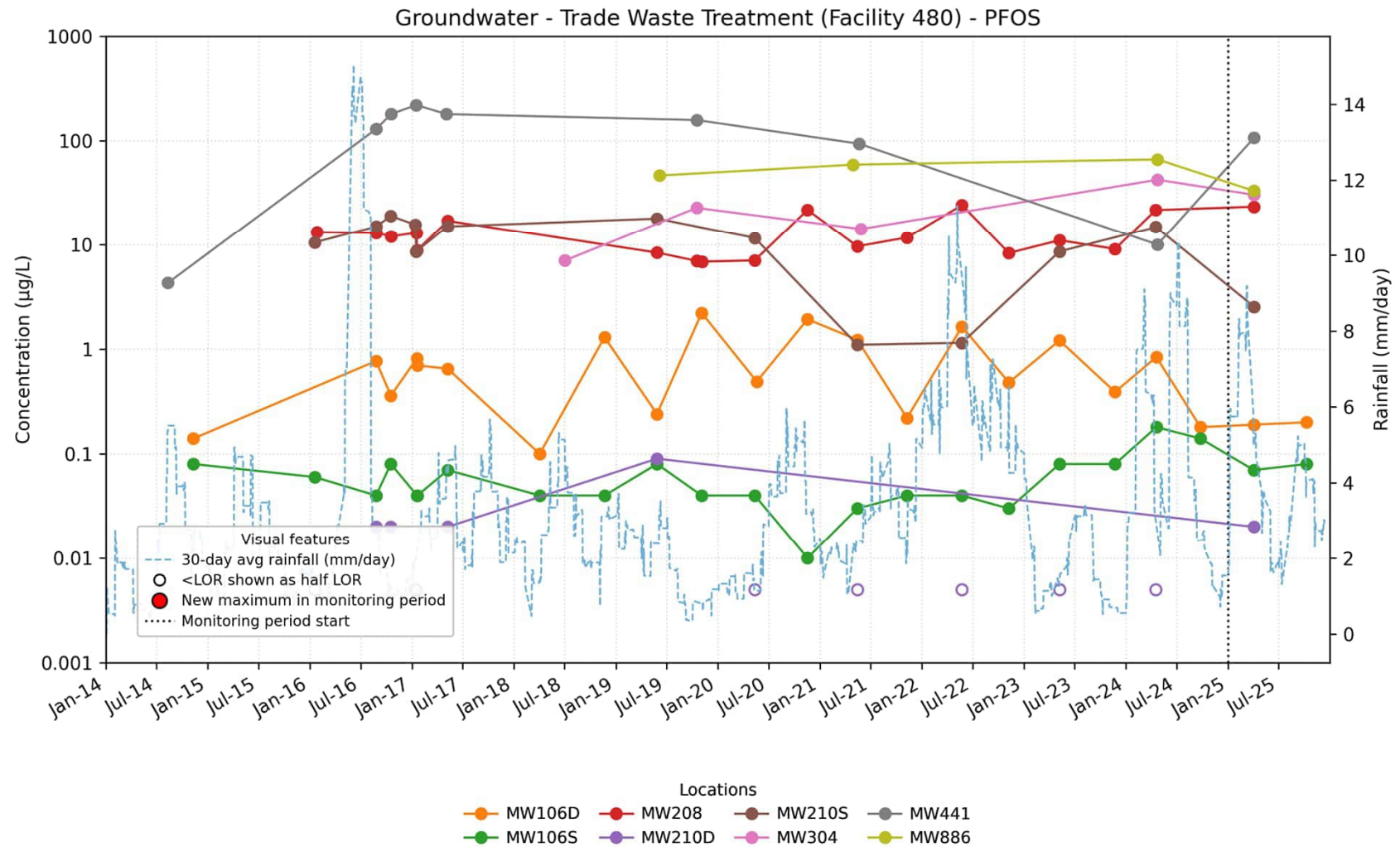
Graph G102 - Temporal Trend



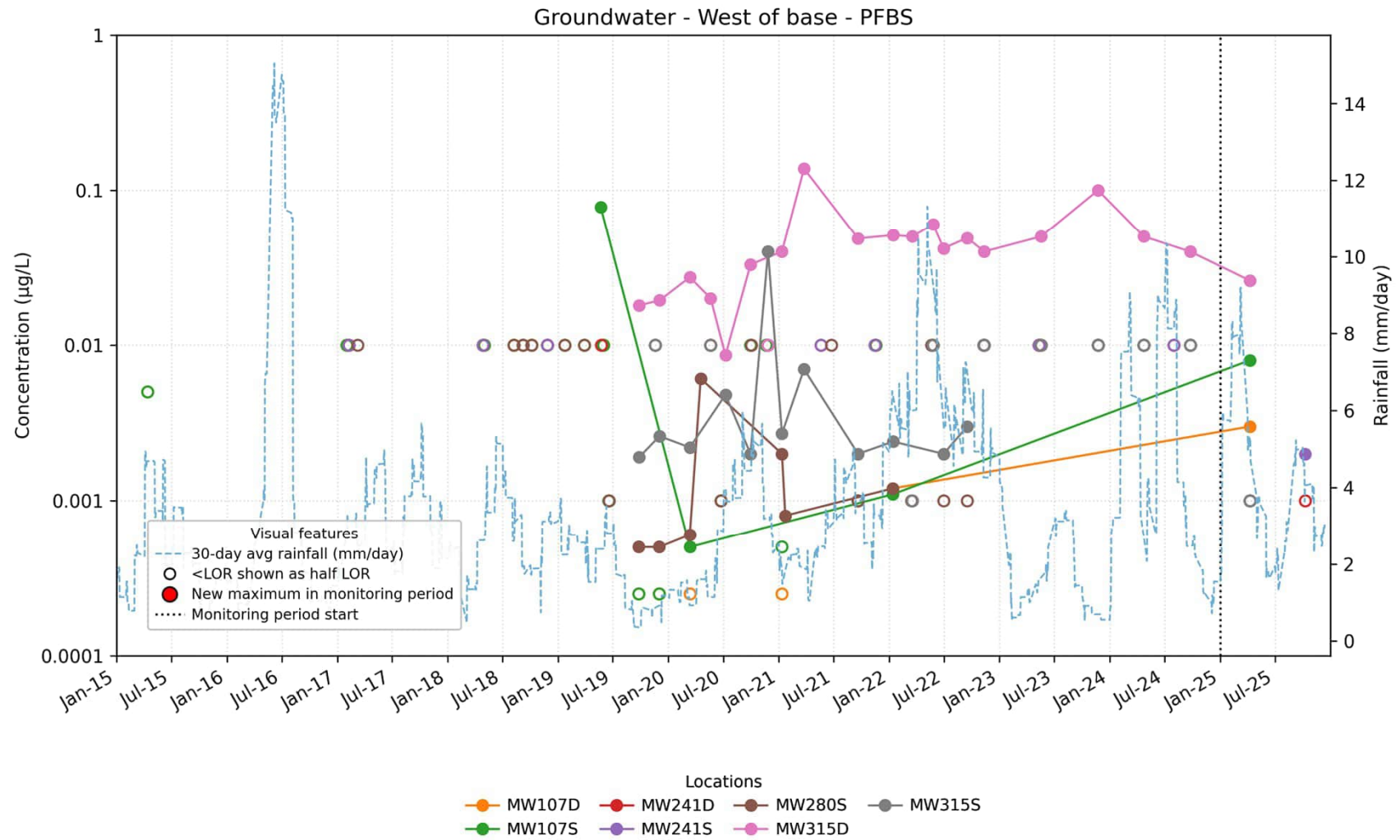
Graph G103 - Temporal Trend



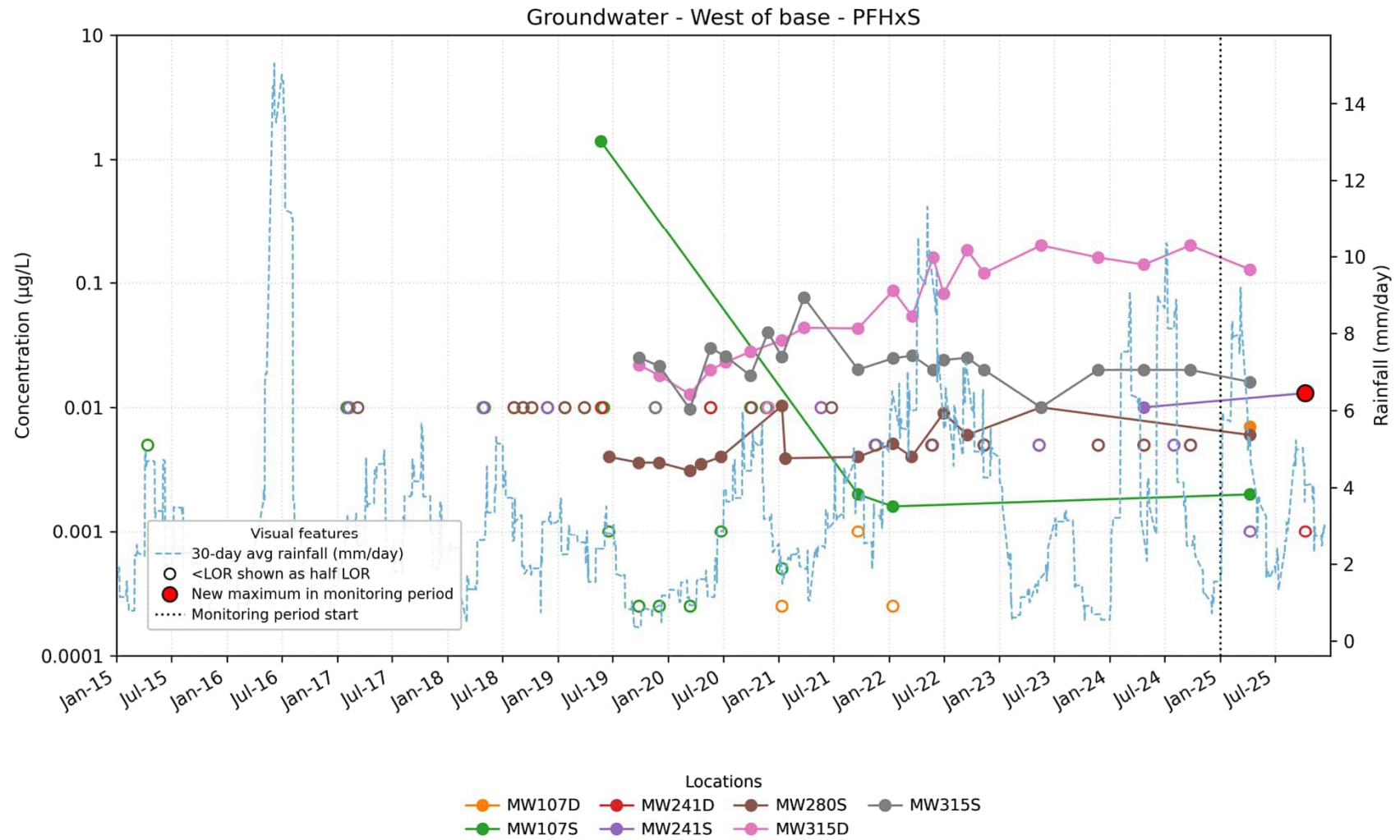
Graph G104 - Temporal Trend



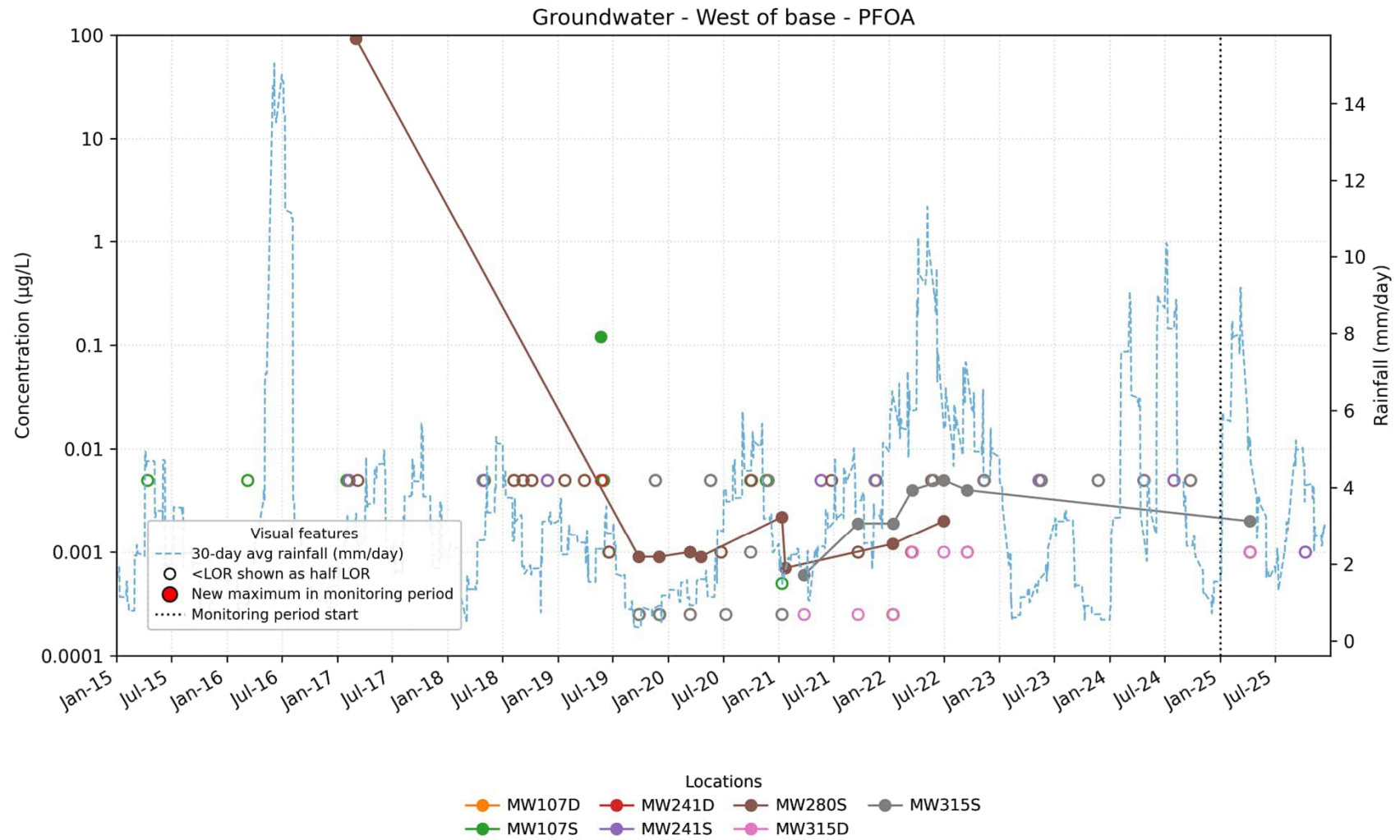
Graph G105 - Temporal Trend



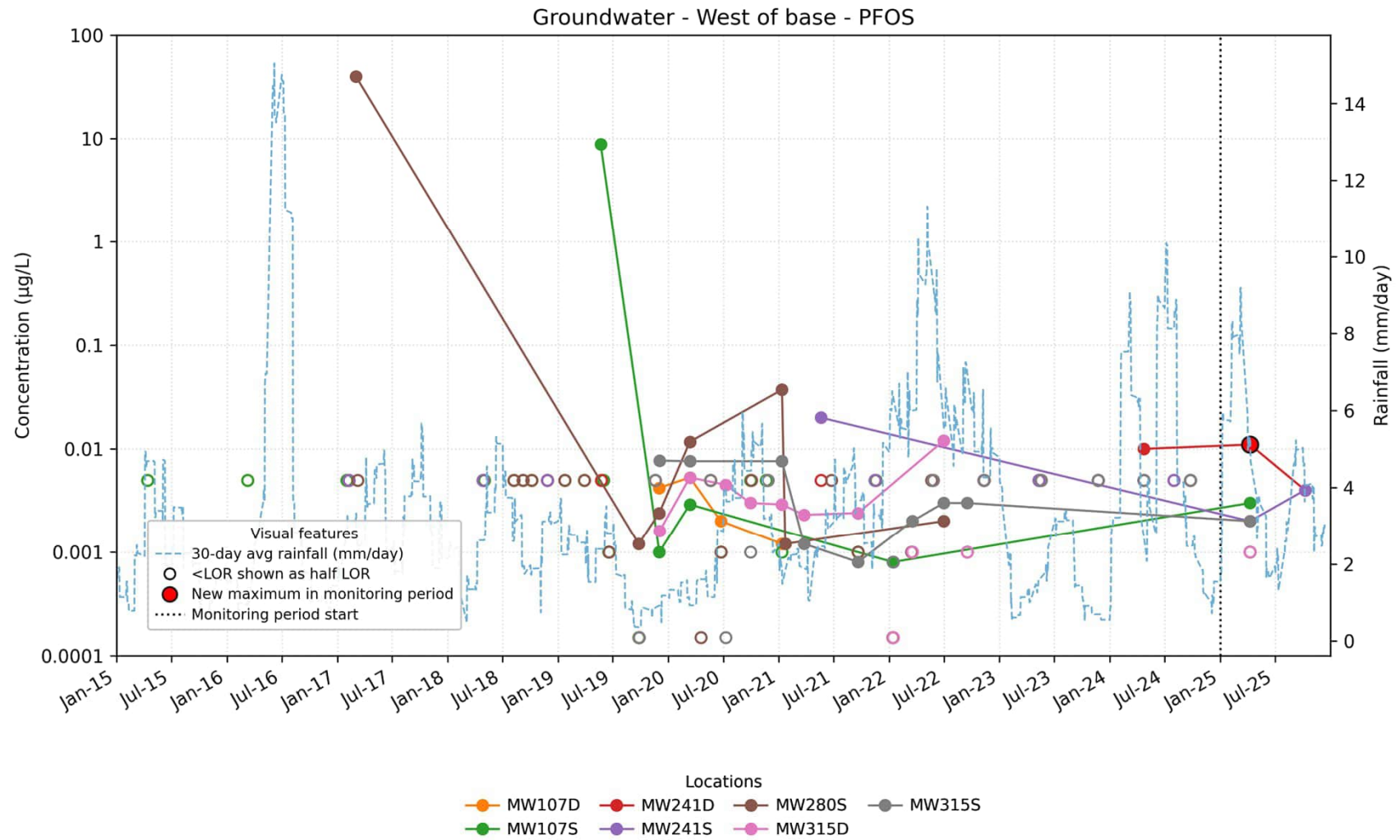
Graph G106 - Temporal Trend



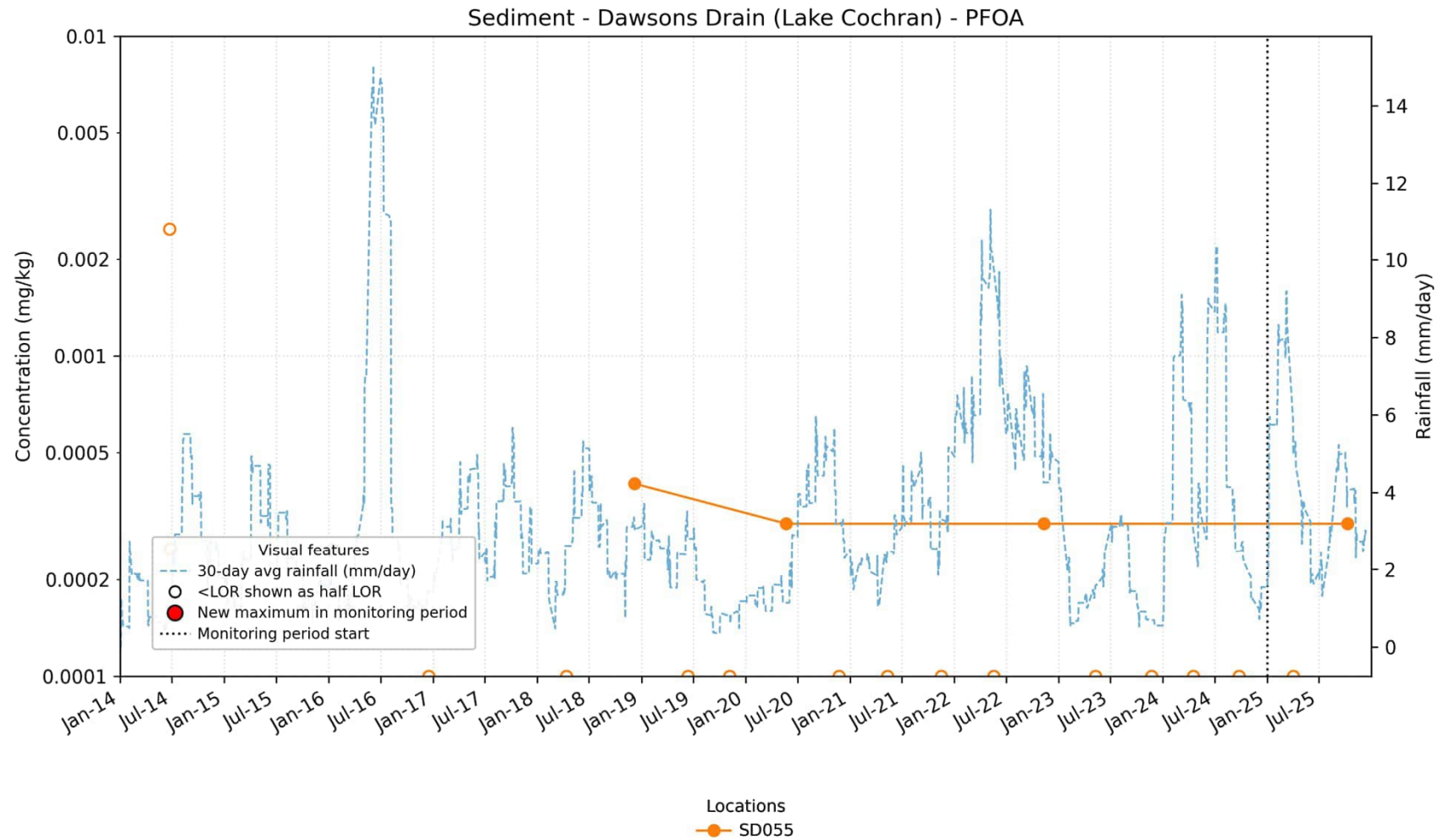
Graph G107 - Temporal Trend



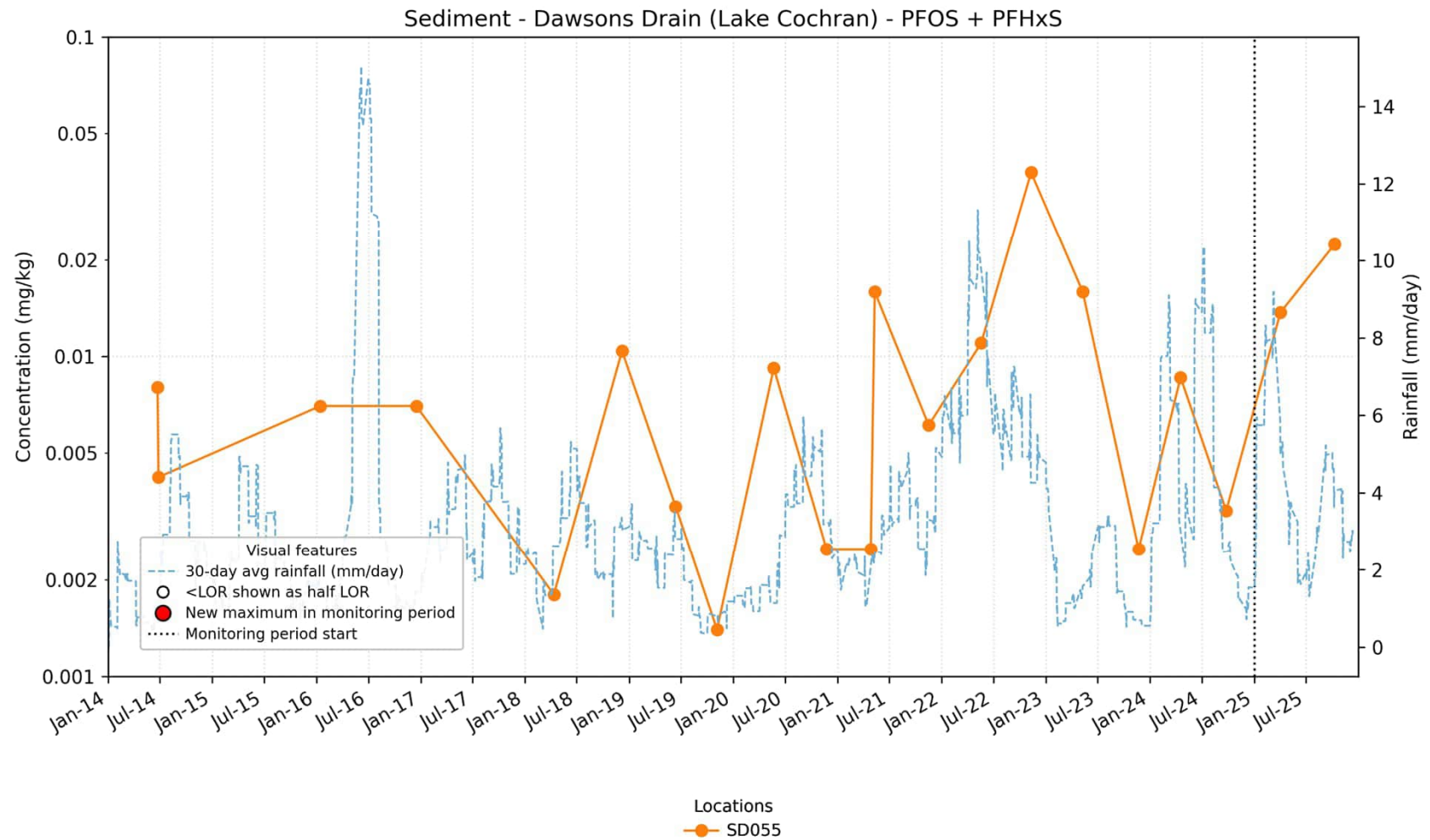
Graph G108 - Temporal Trend



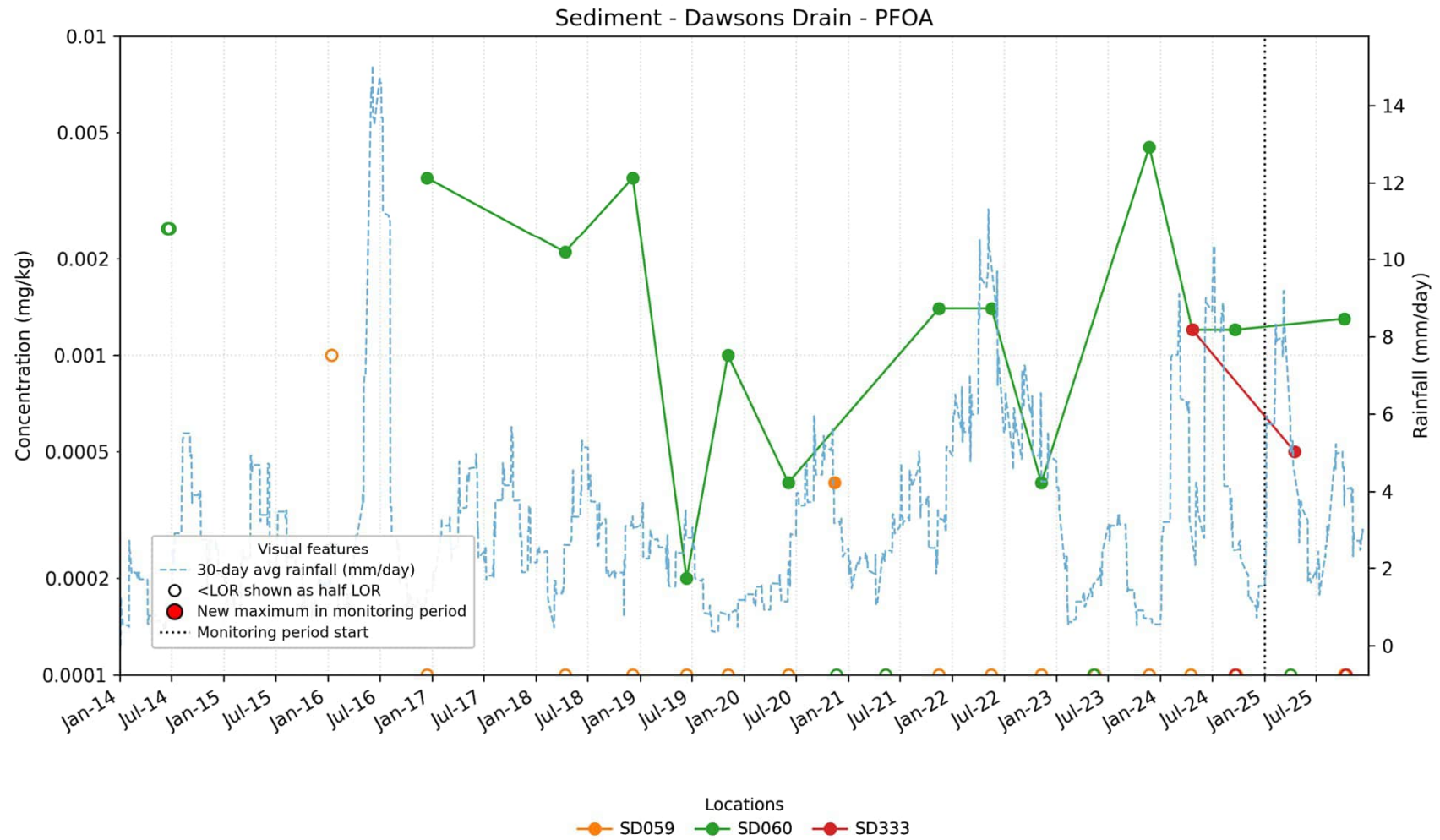
Graph G109 - Temporal Trend



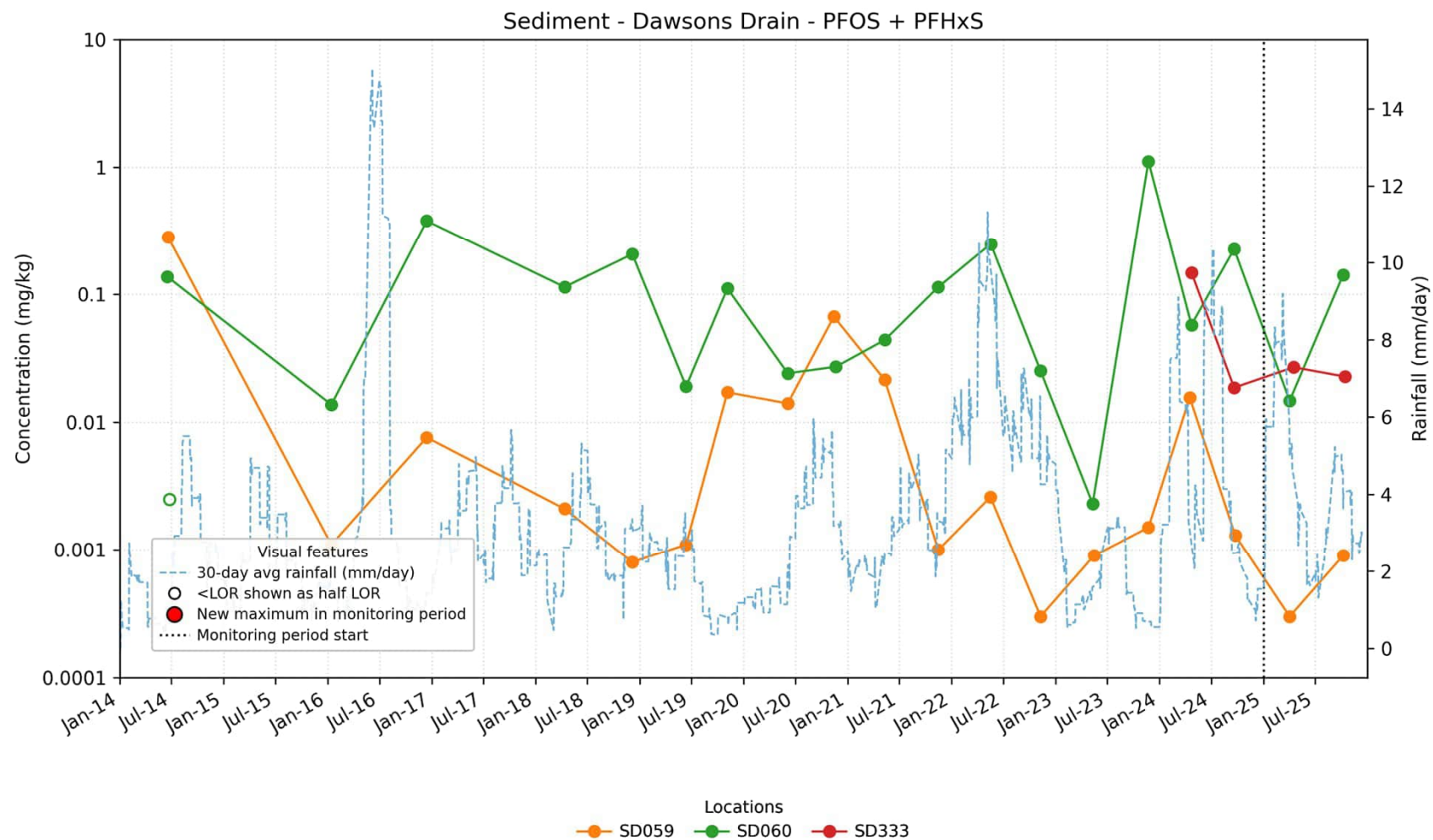
Graph G110 - Temporal Trend



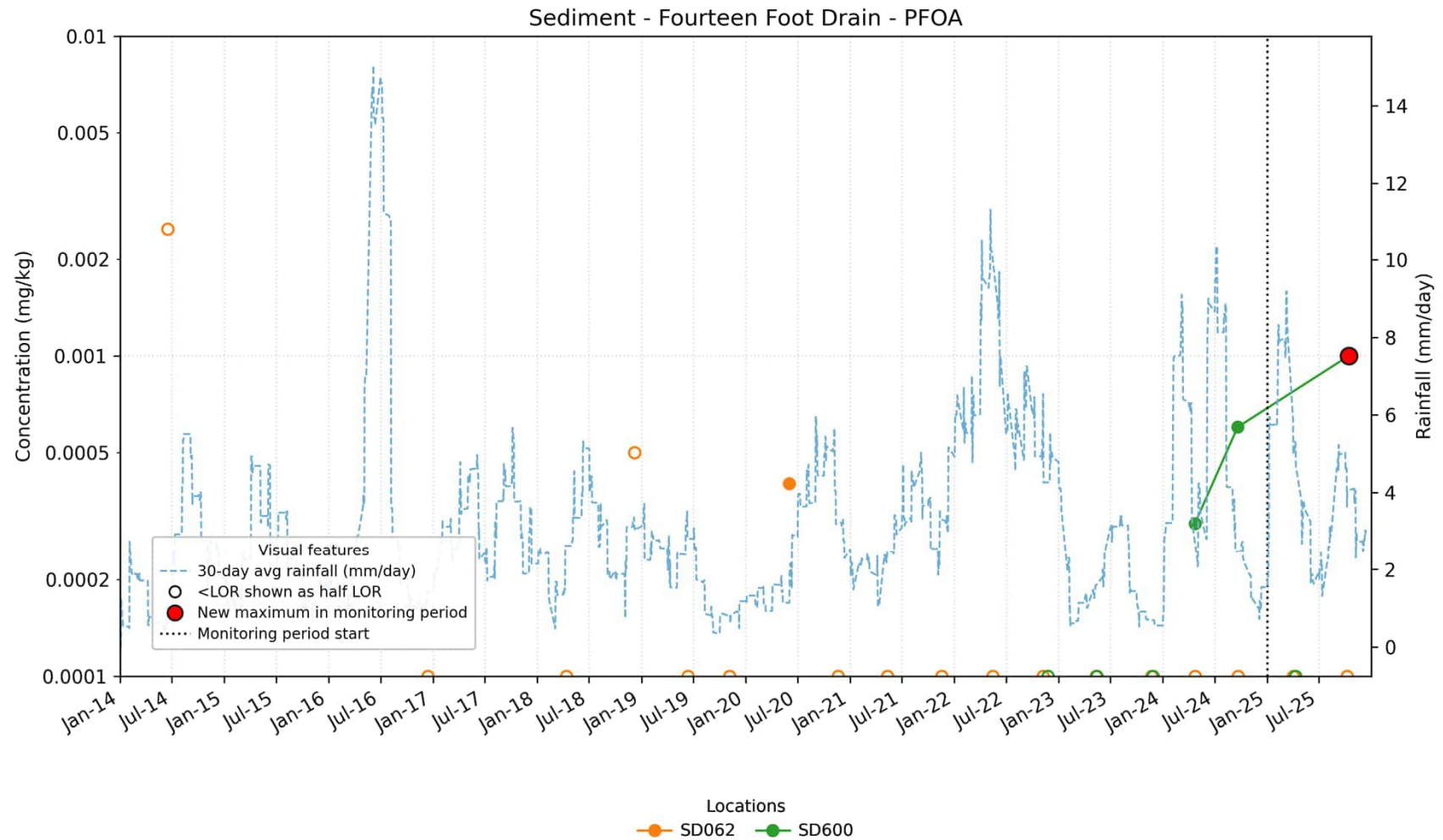
Graph G111 - Temporal Trend



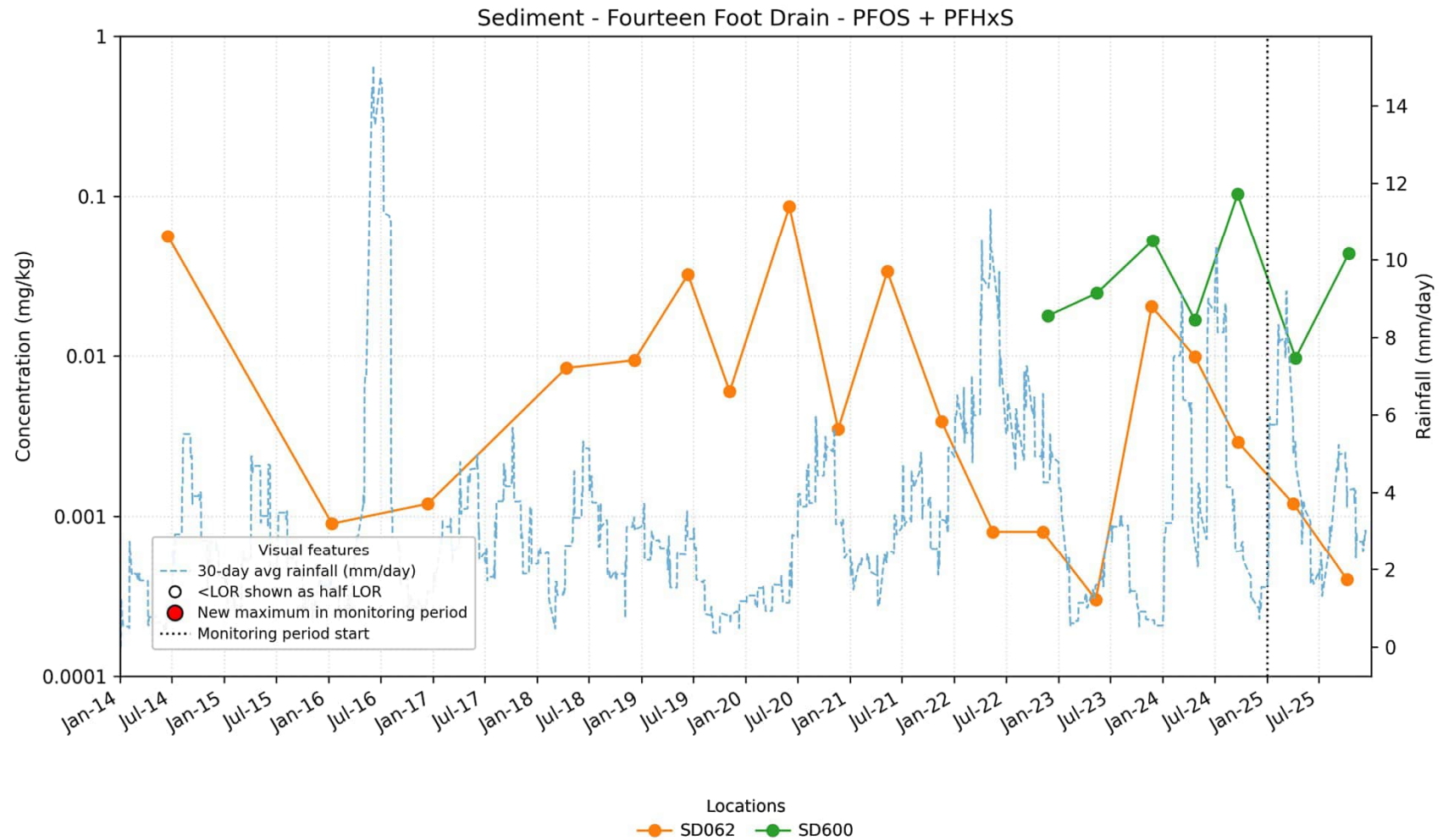
Graph G112 - Temporal Trend



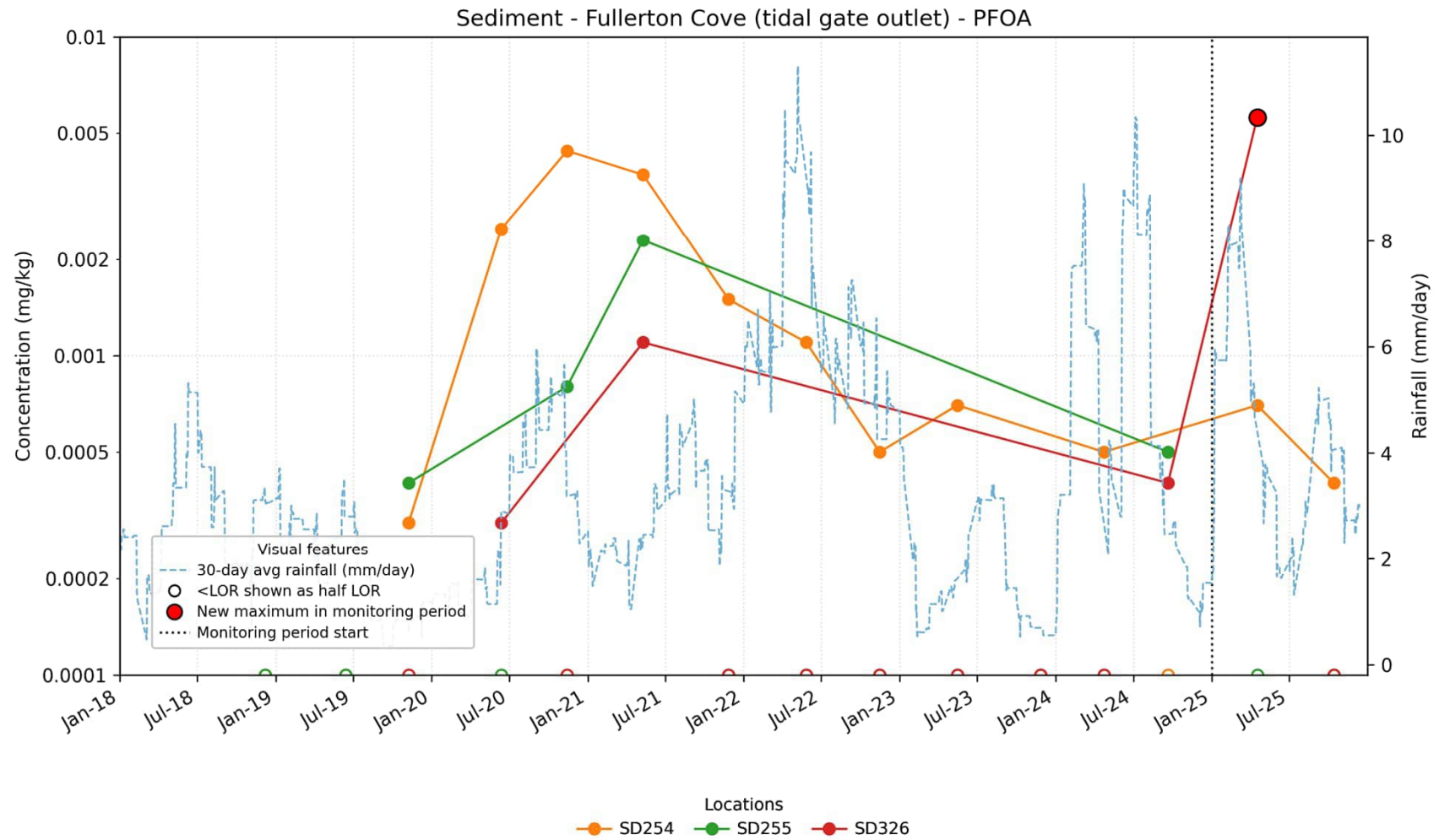
Graph G113 - Temporal Trend



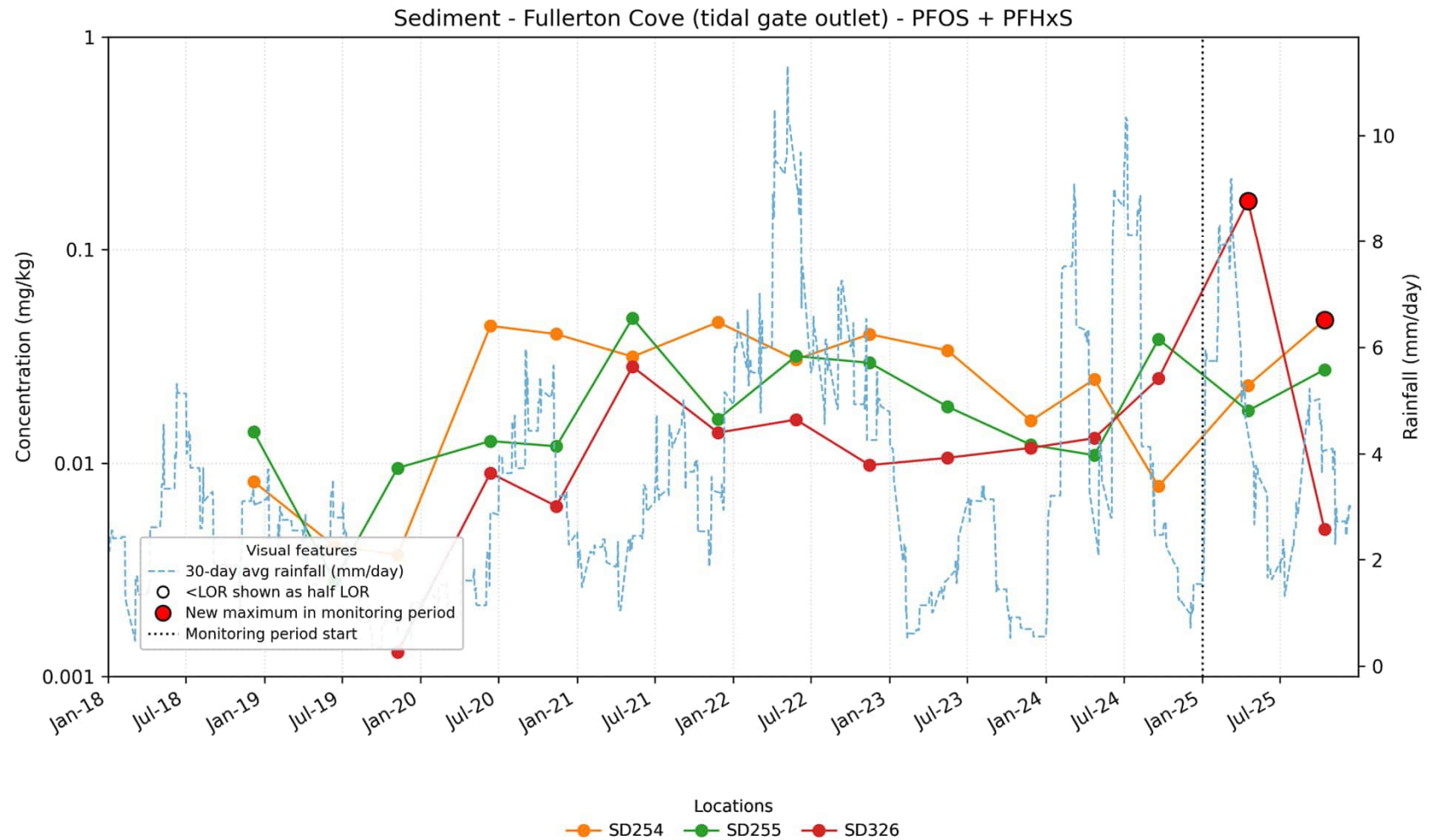
Graph G114 - Temporal Trend



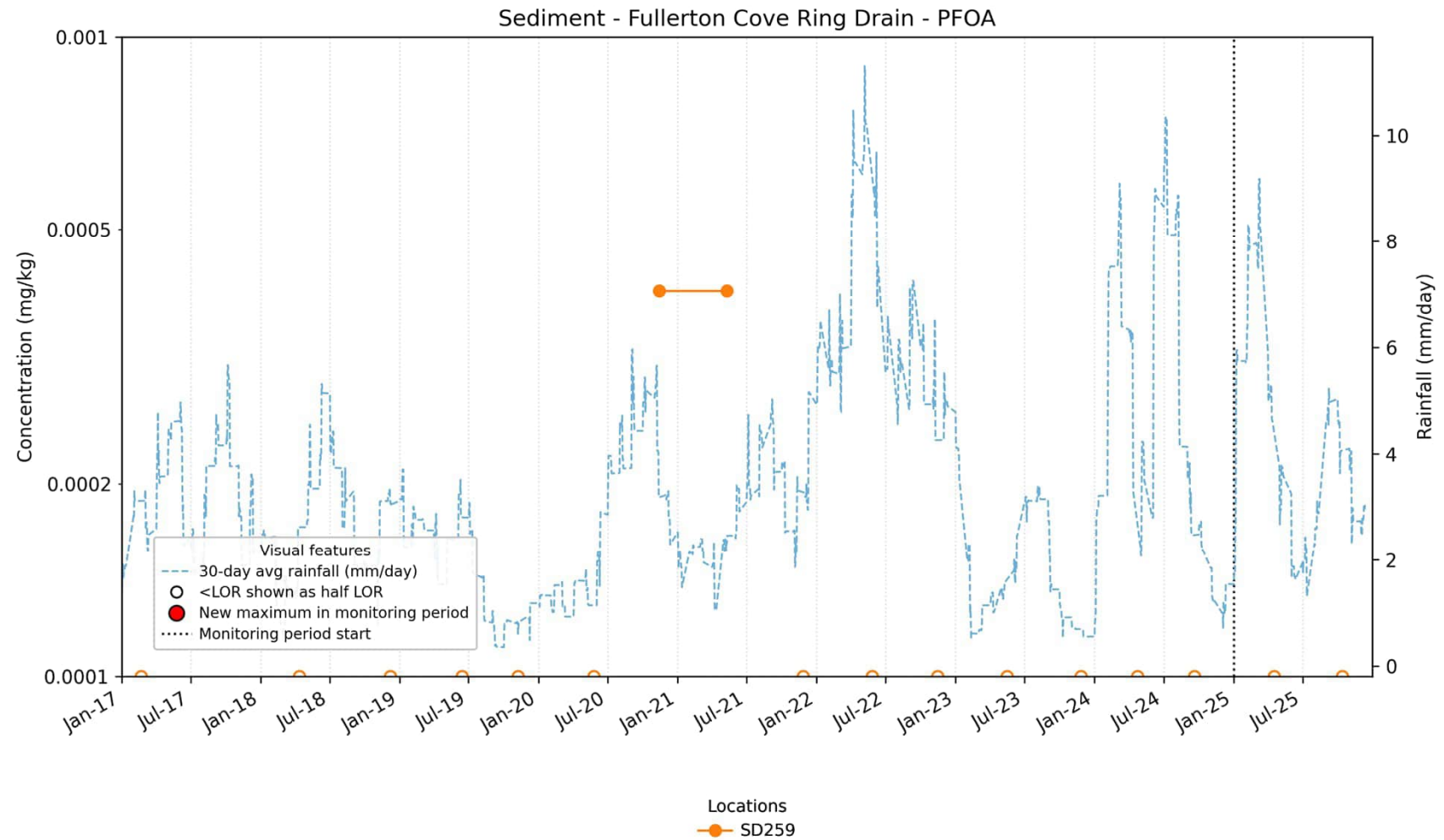
Graph G115 - Temporal Trend



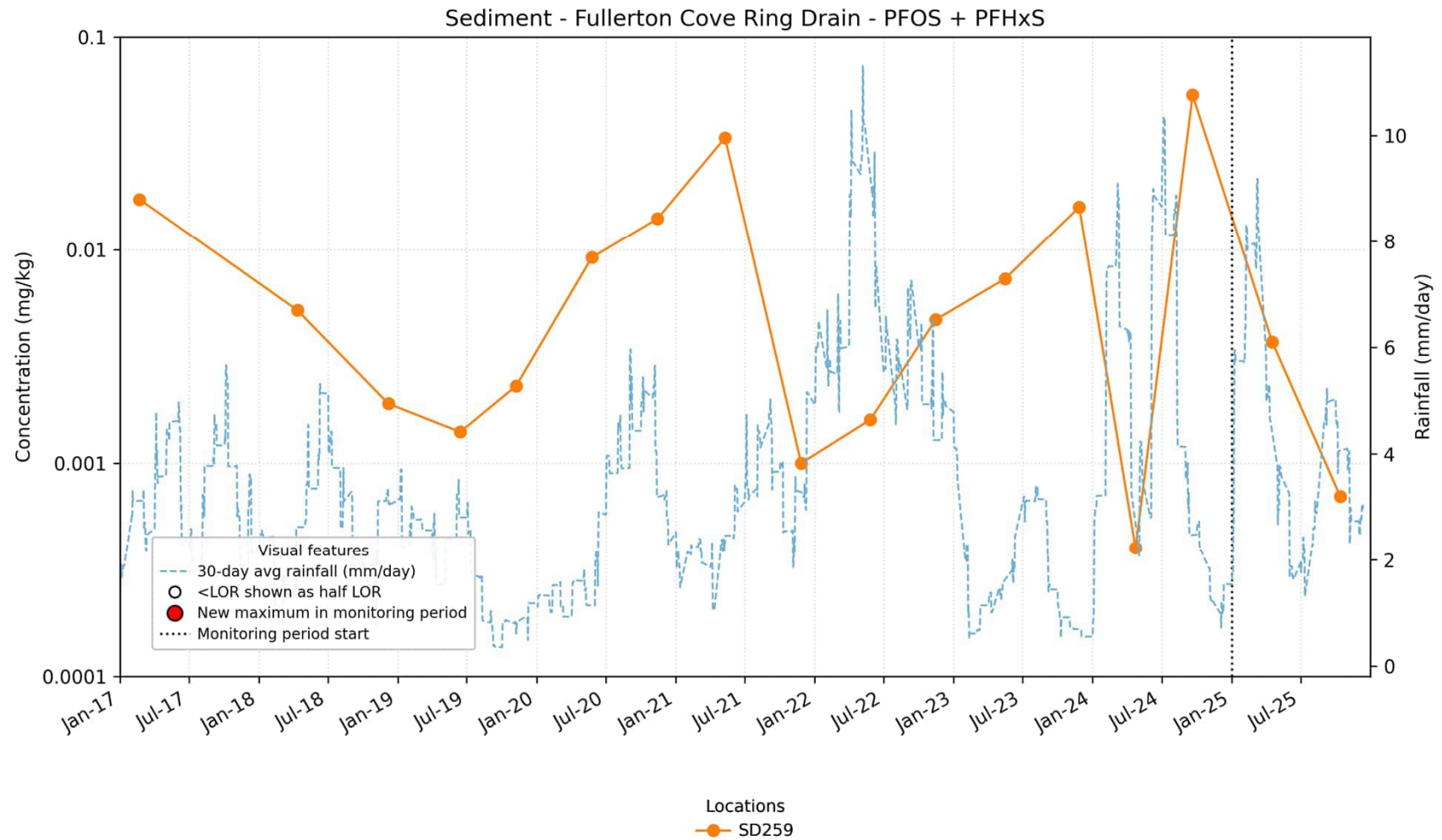
Graph G116 - Temporal Trend



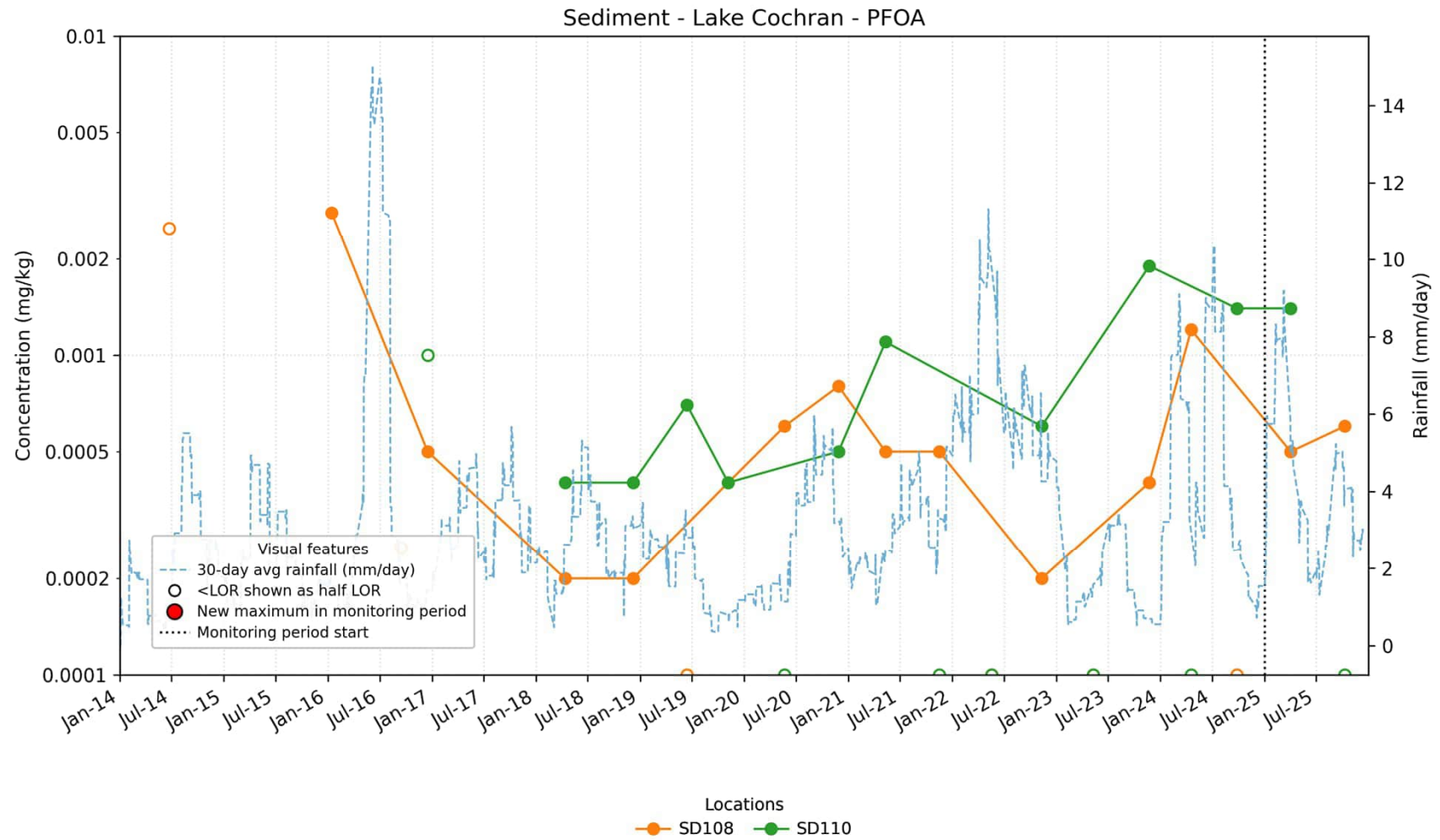
Graph G117 - Temporal Trend



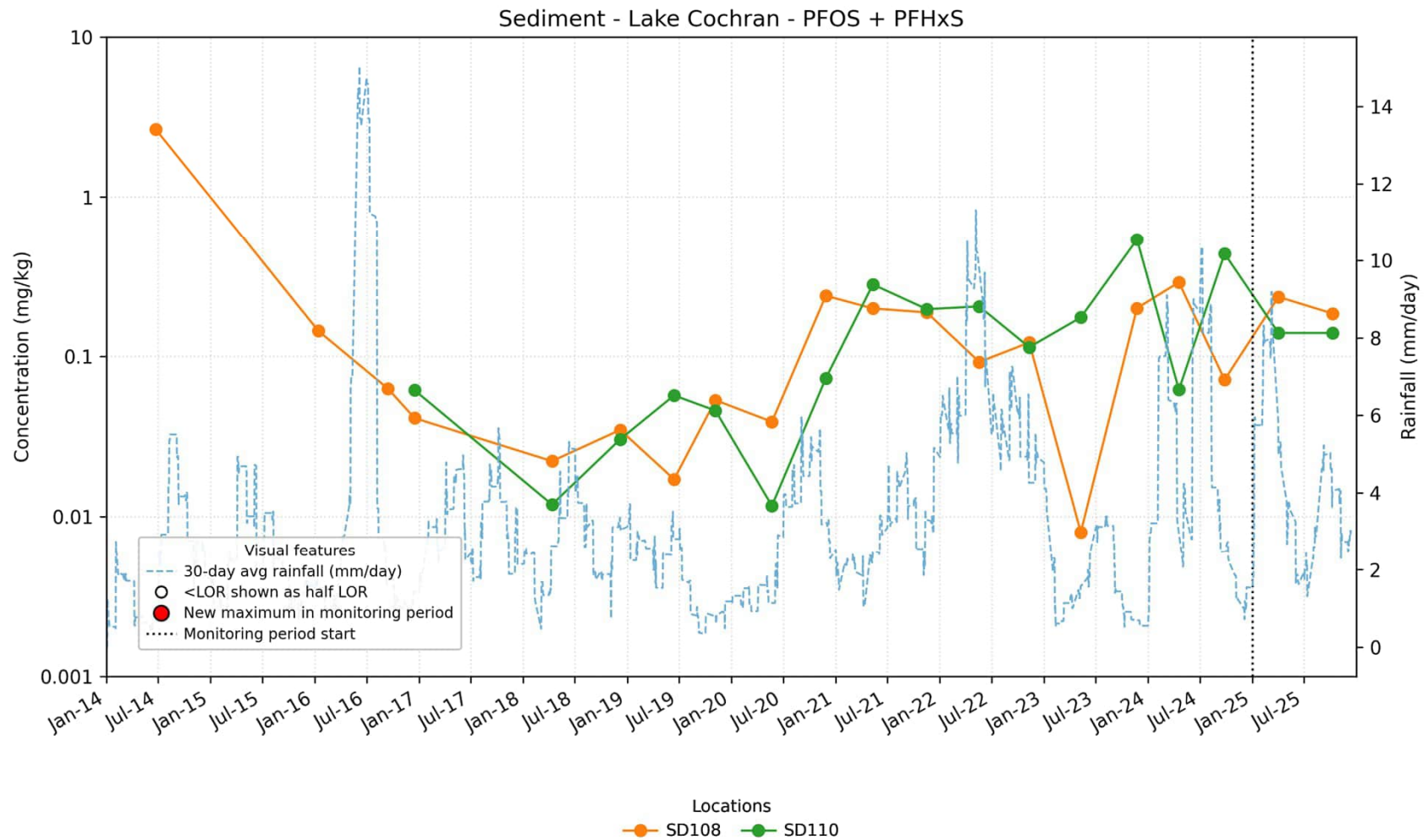
Graph G118 - Temporal Trend



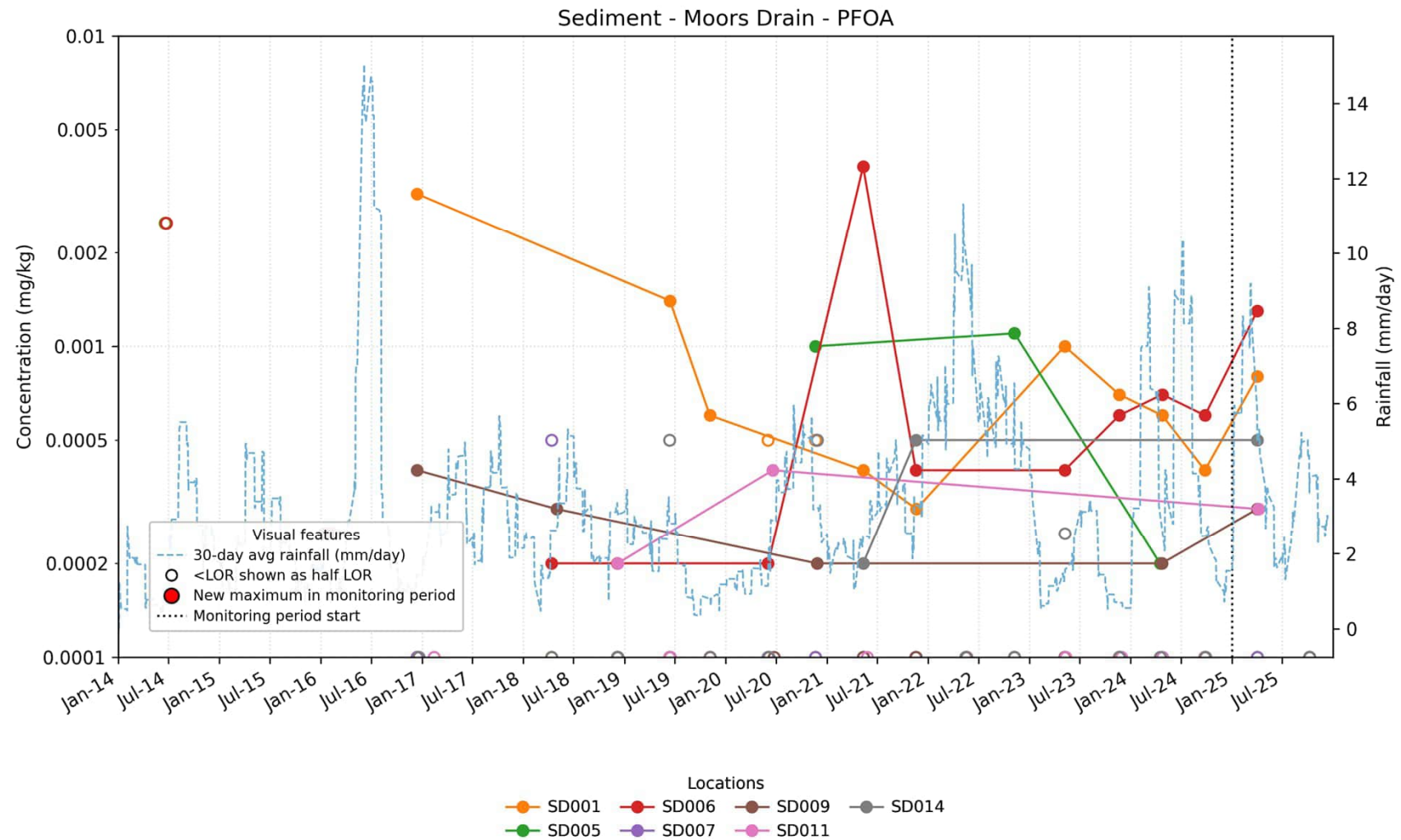
Graph G119 - Temporal Trend



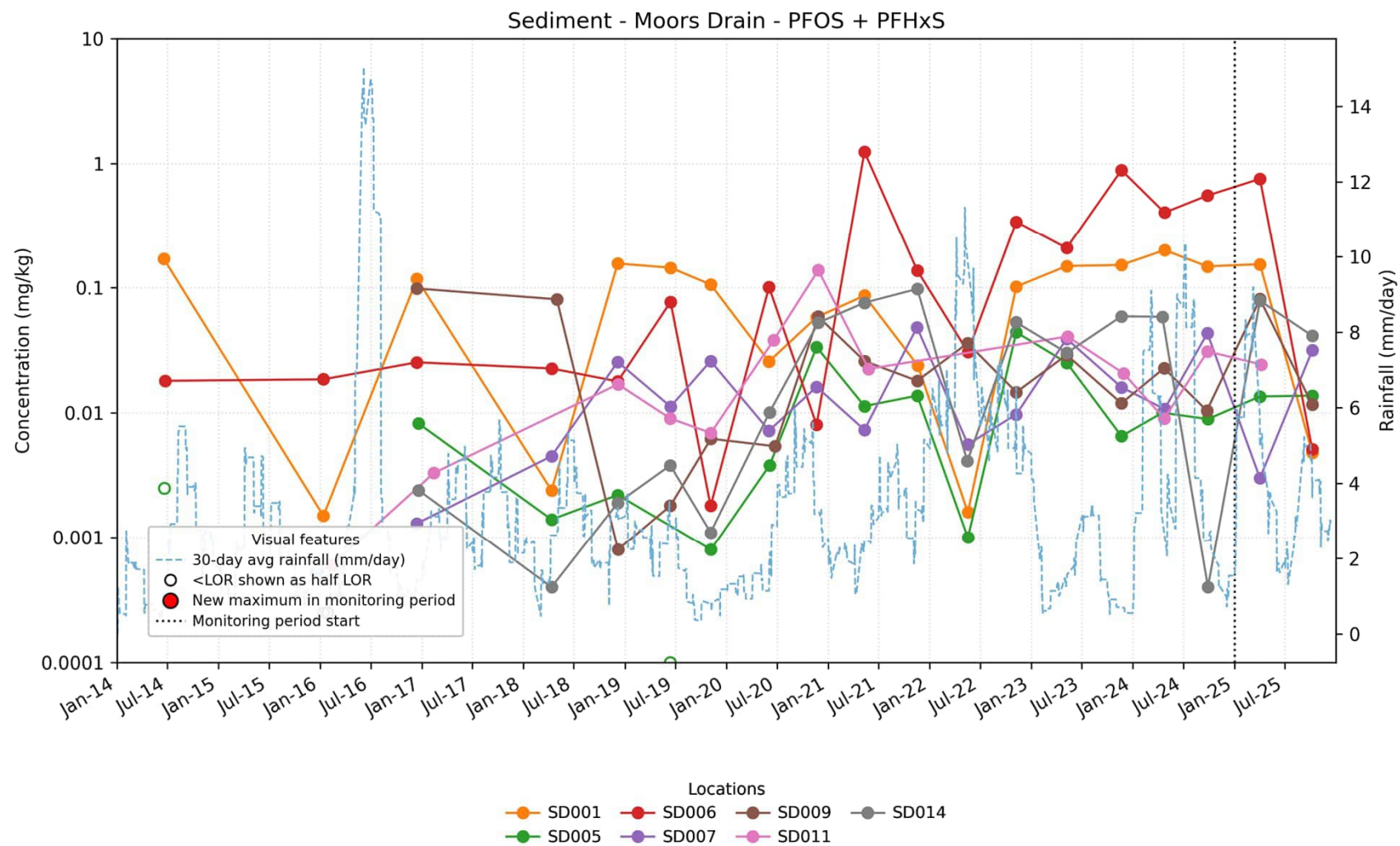
Graph G120 - Temporal Trend



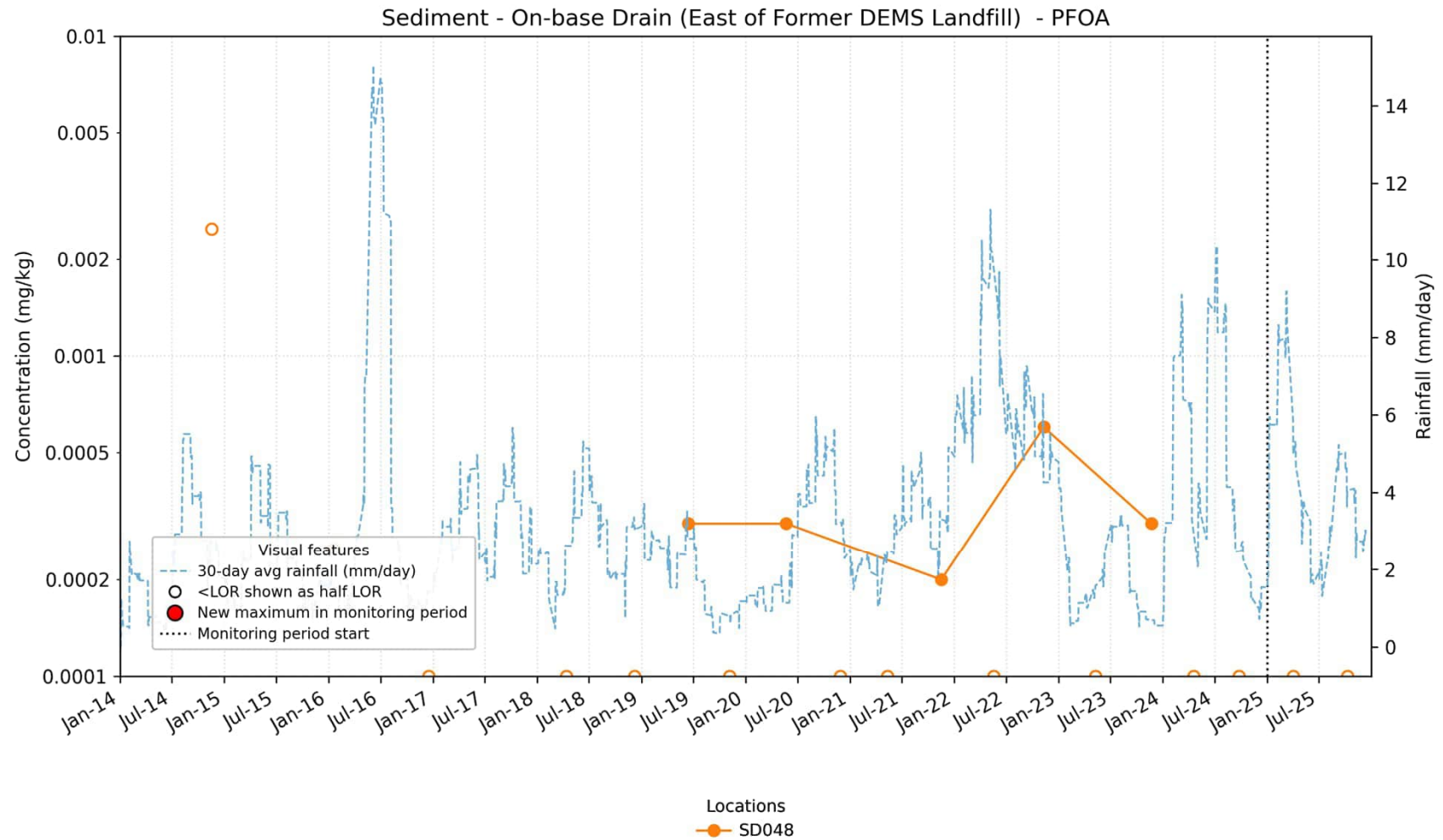
Graph G121 - Temporal Trend



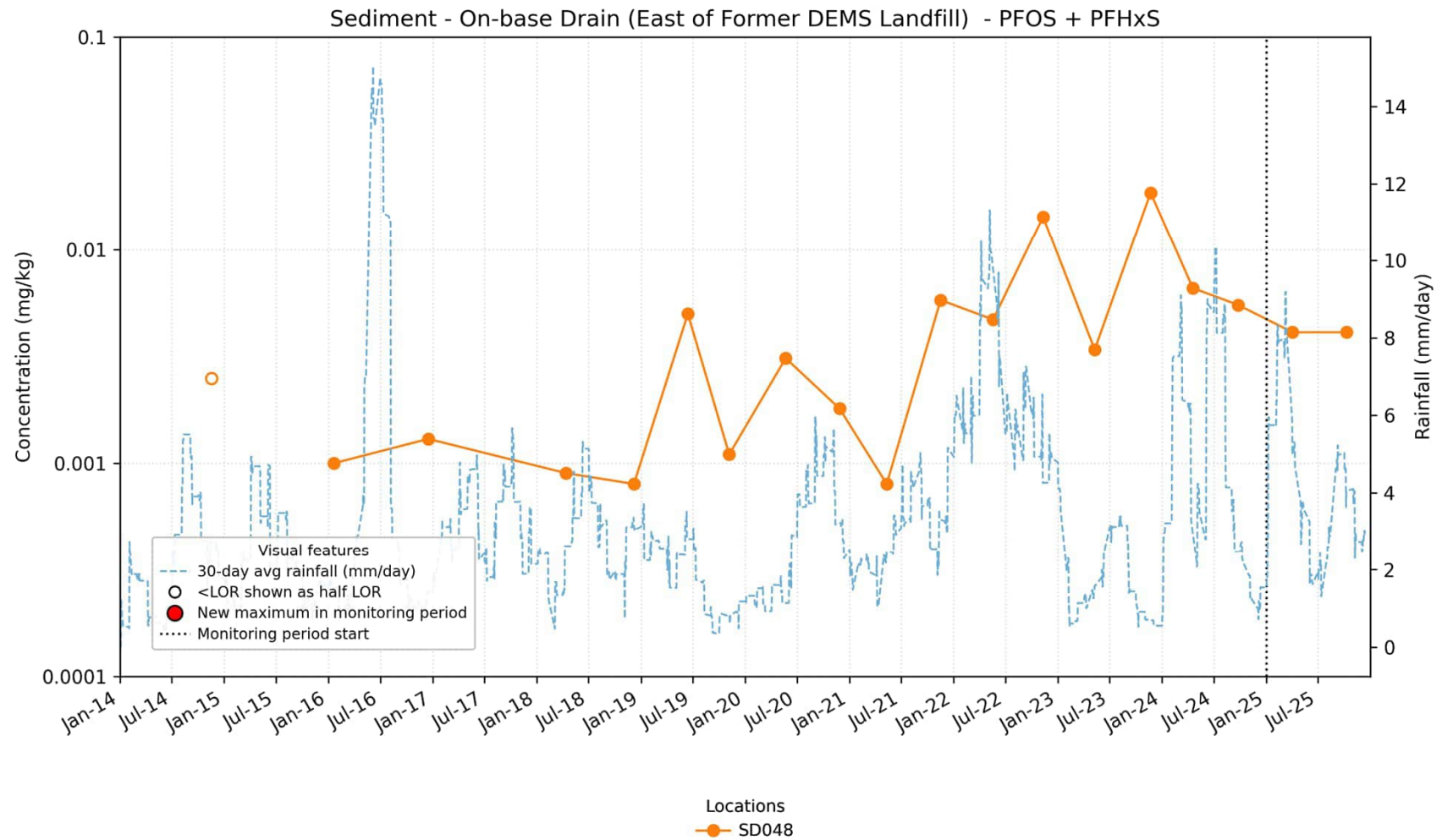
Graph G122 - Temporal Trend



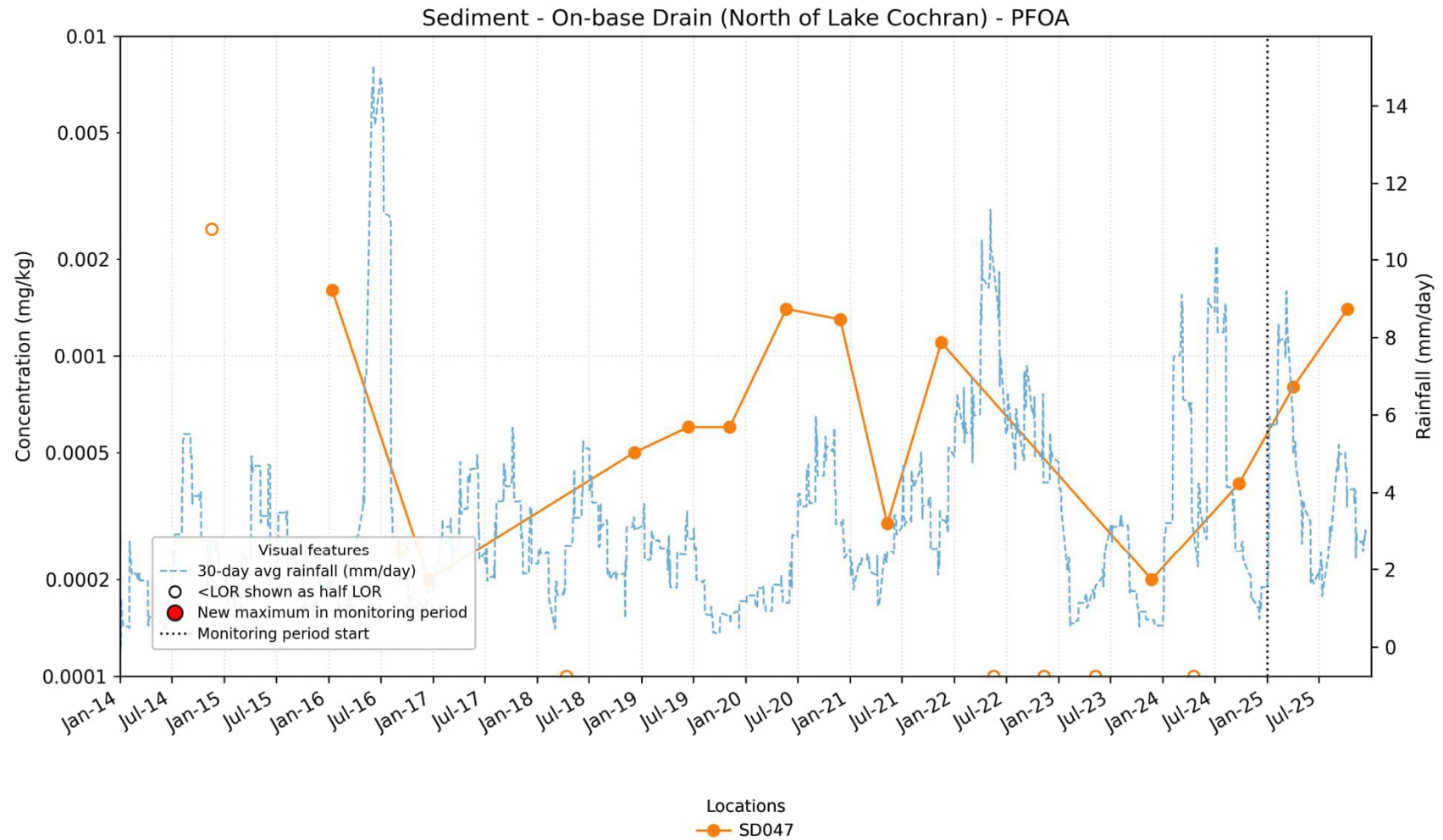
Graph G123 - Temporal Trend



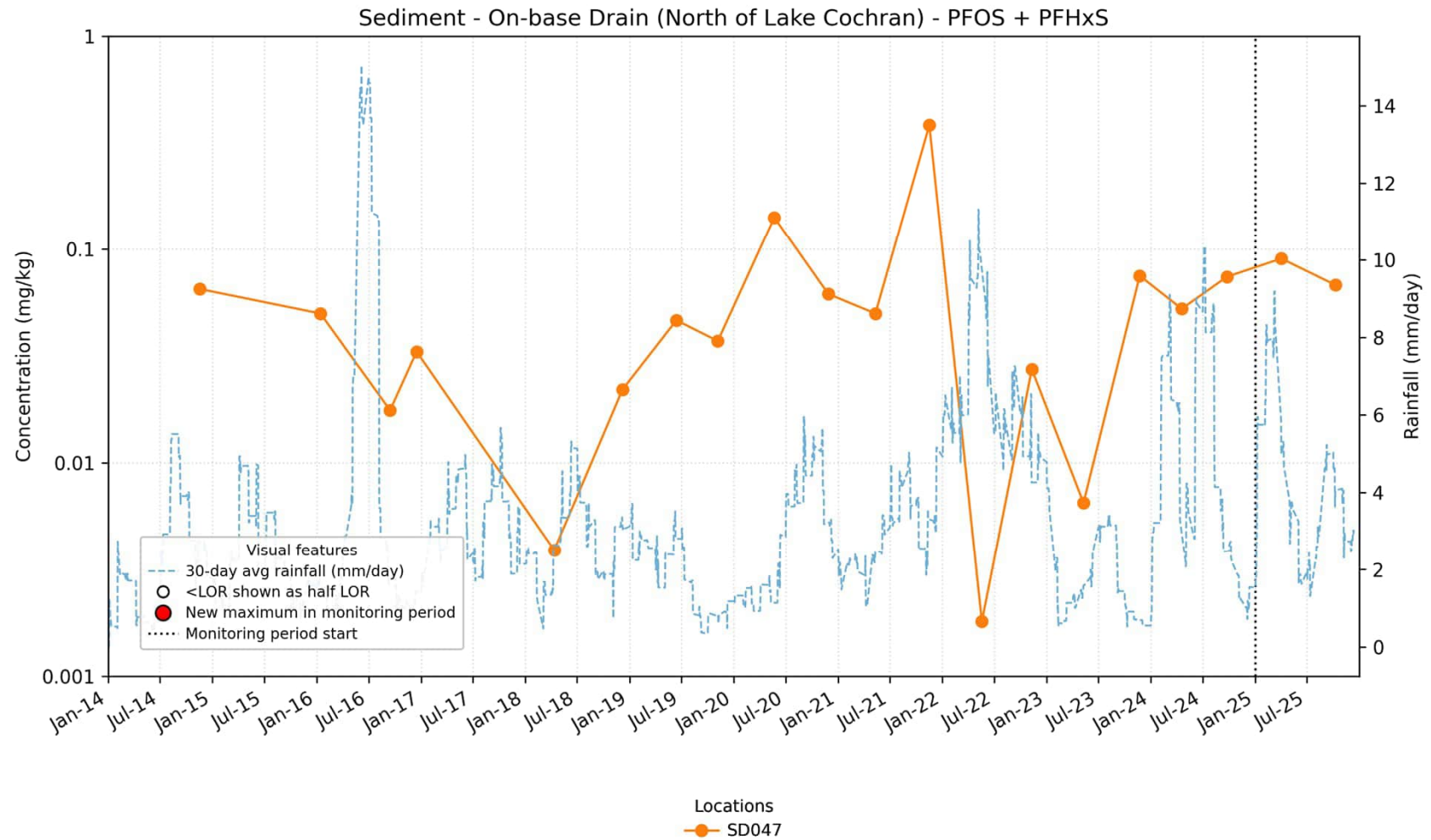
Graph G124 - Temporal Trend



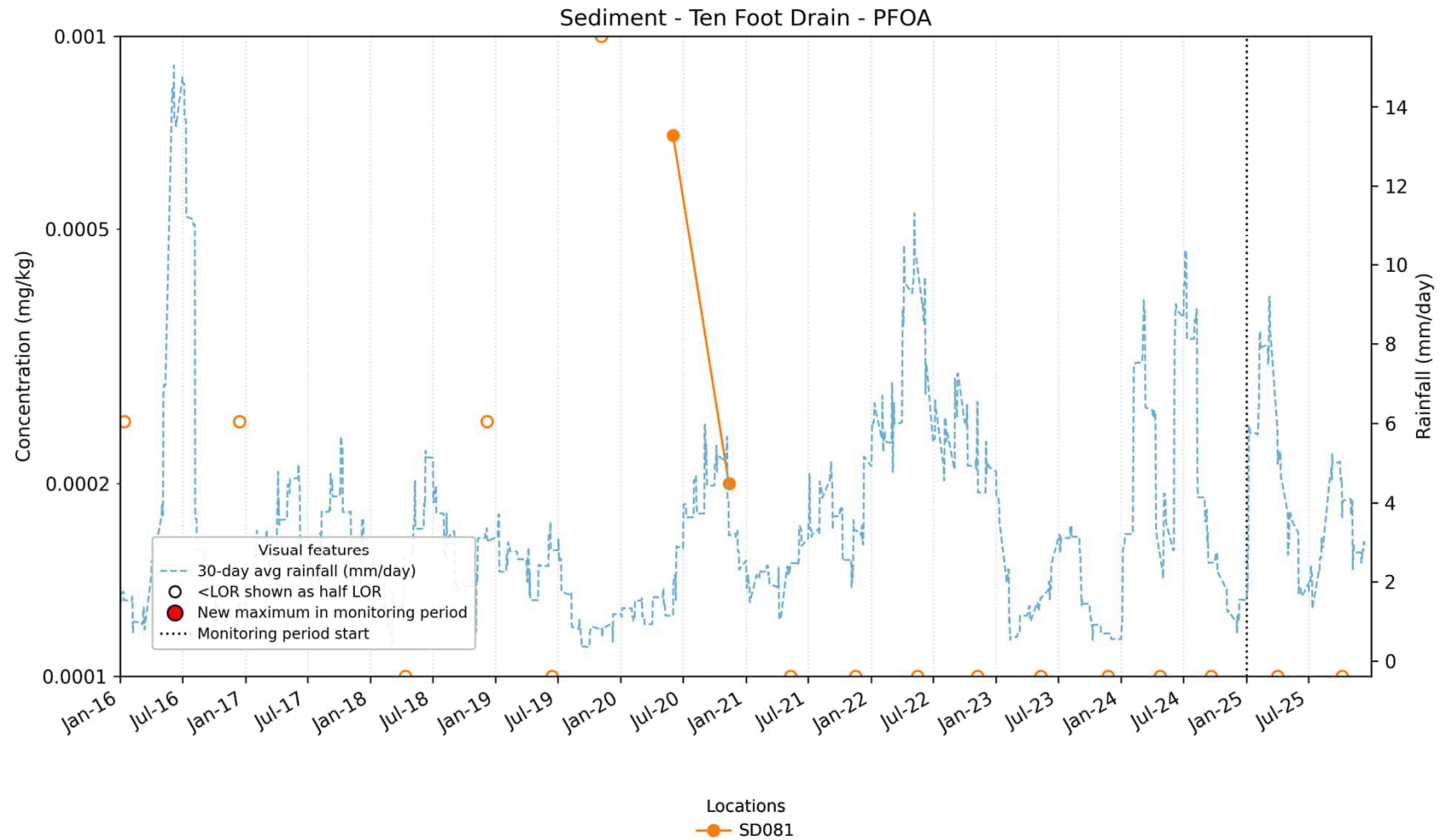
Graph G125 - Temporal Trend



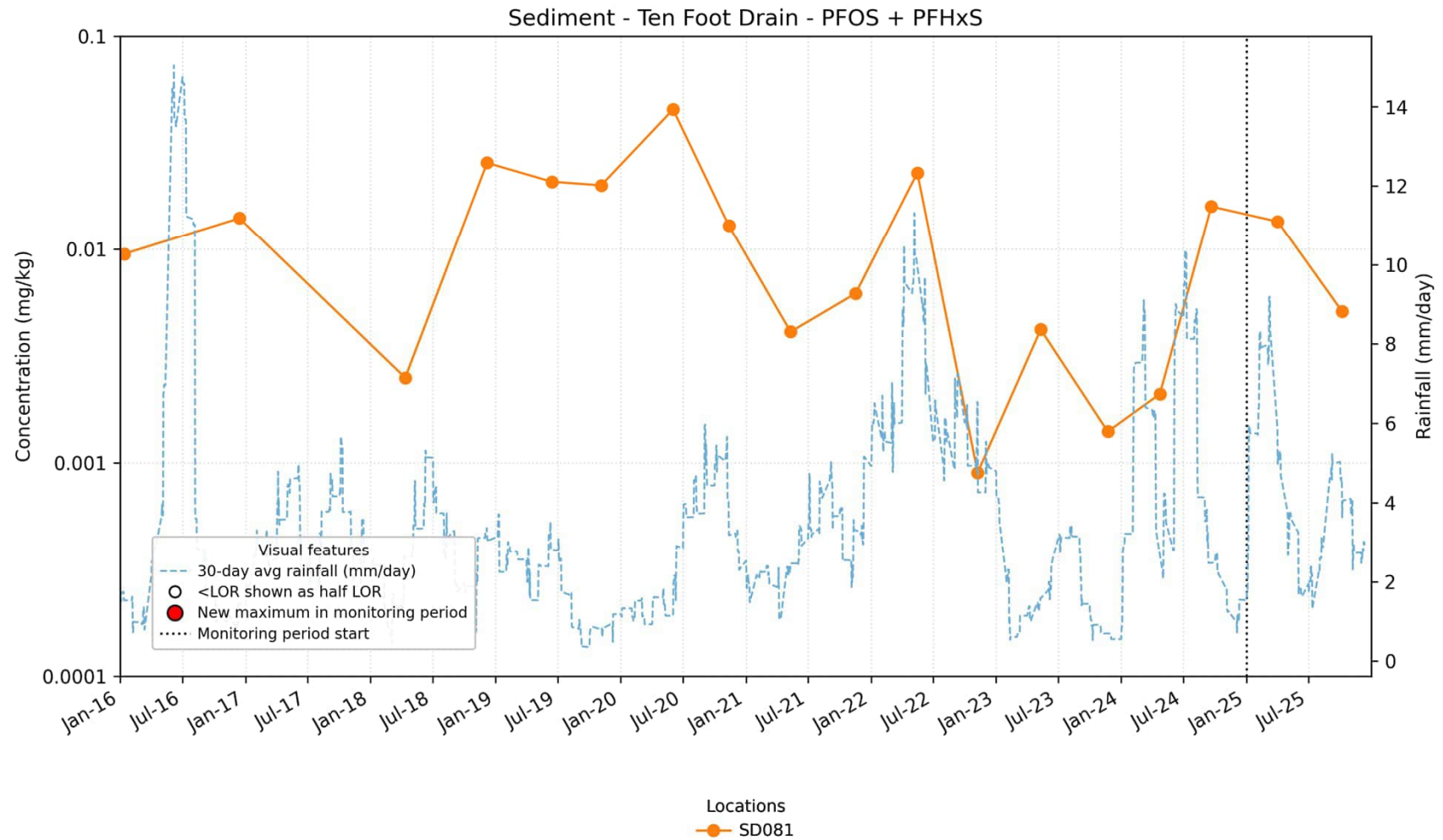
Graph G126 - Temporal Trend



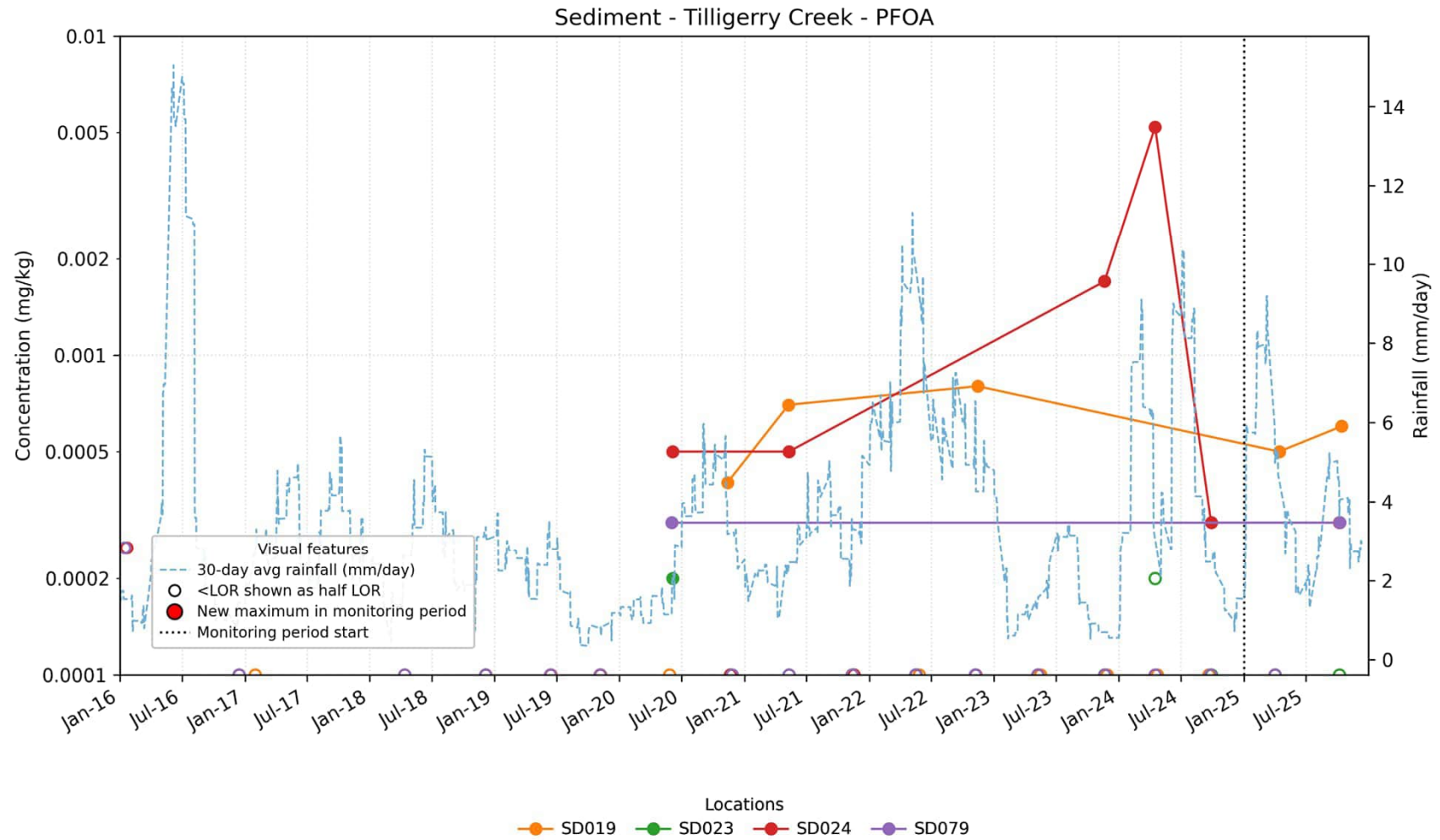
Graph G127 - Temporal Trend



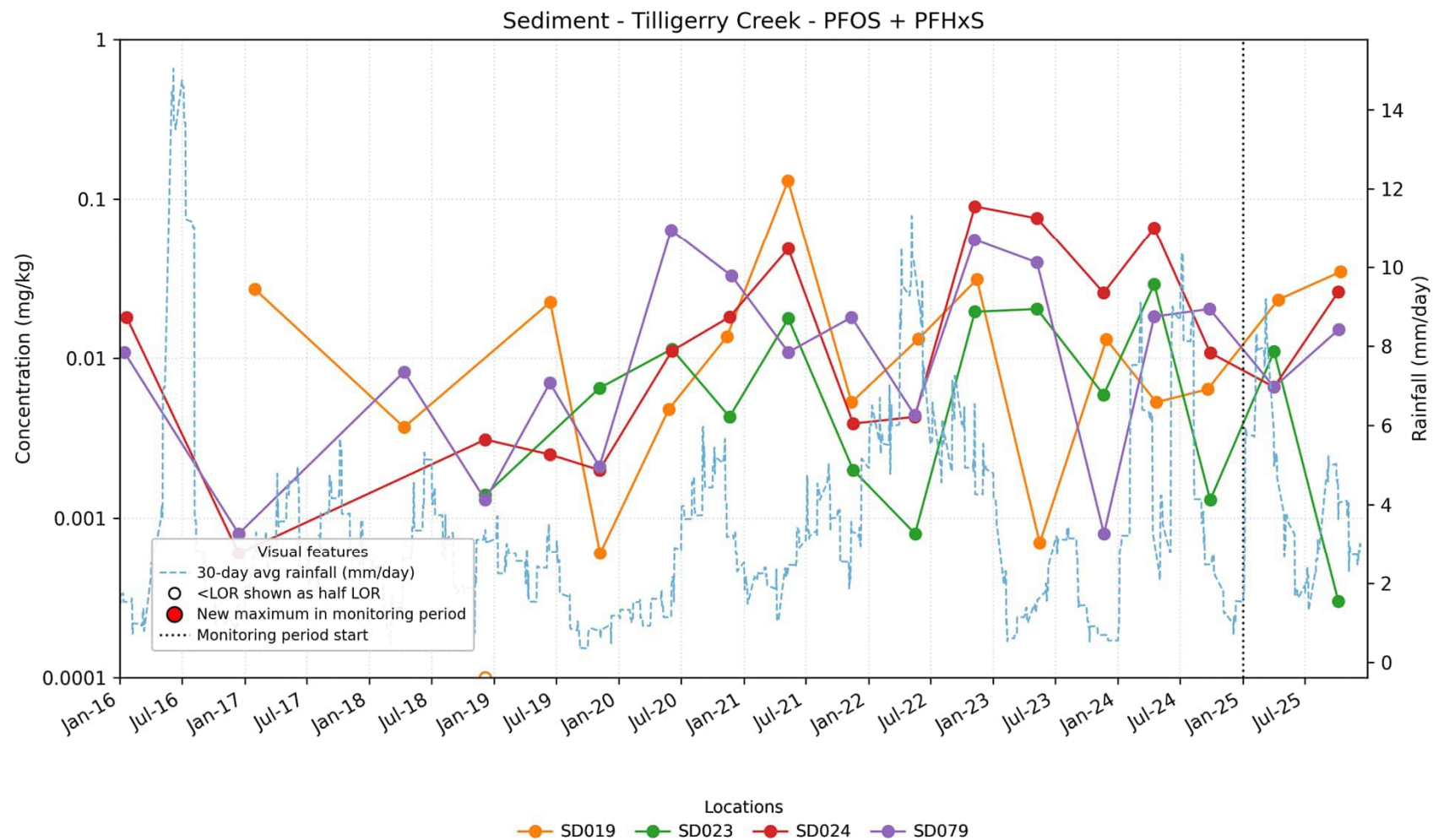
Graph G128 - Temporal Trend



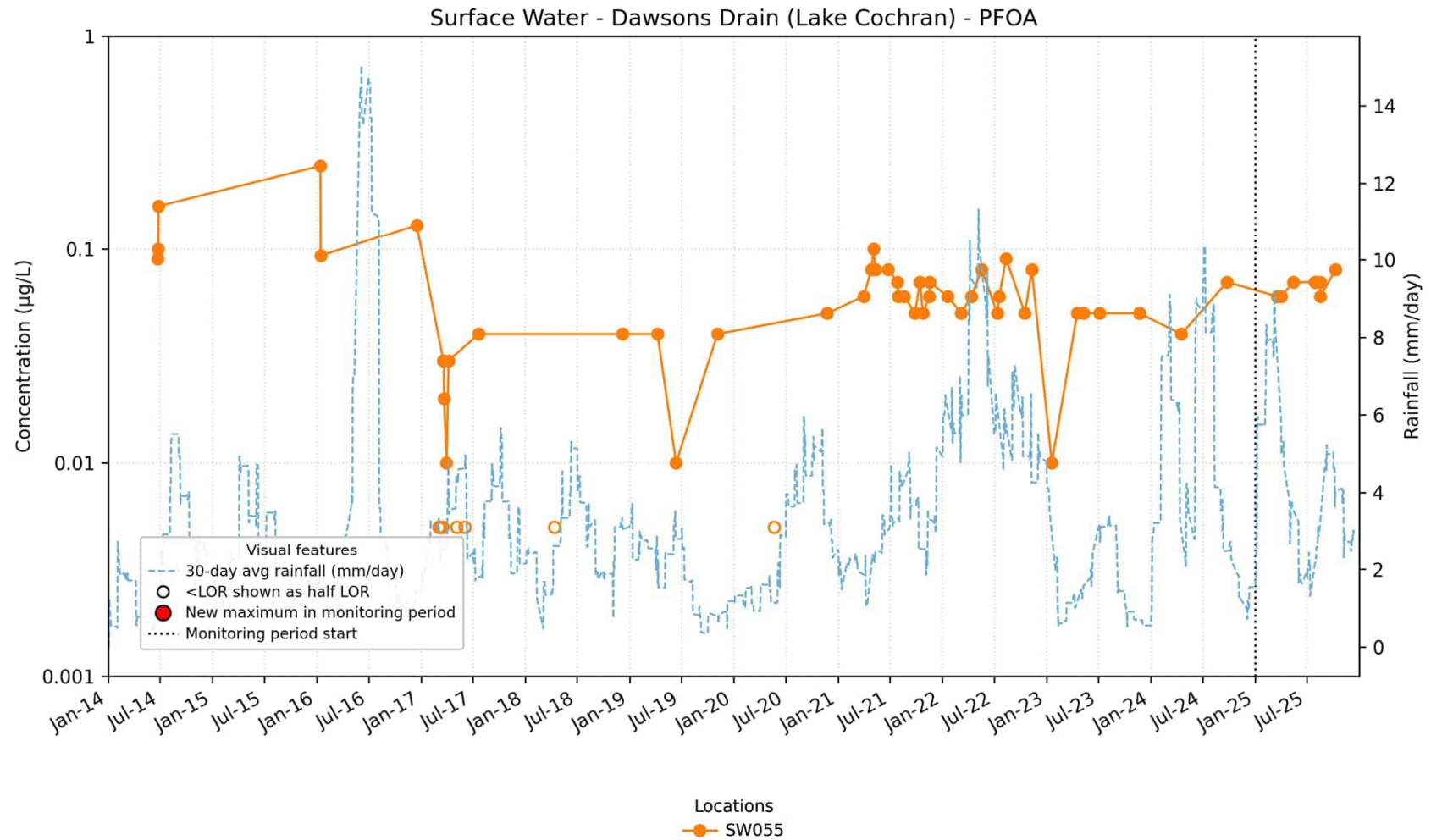
Graph G129 - Temporal Trend



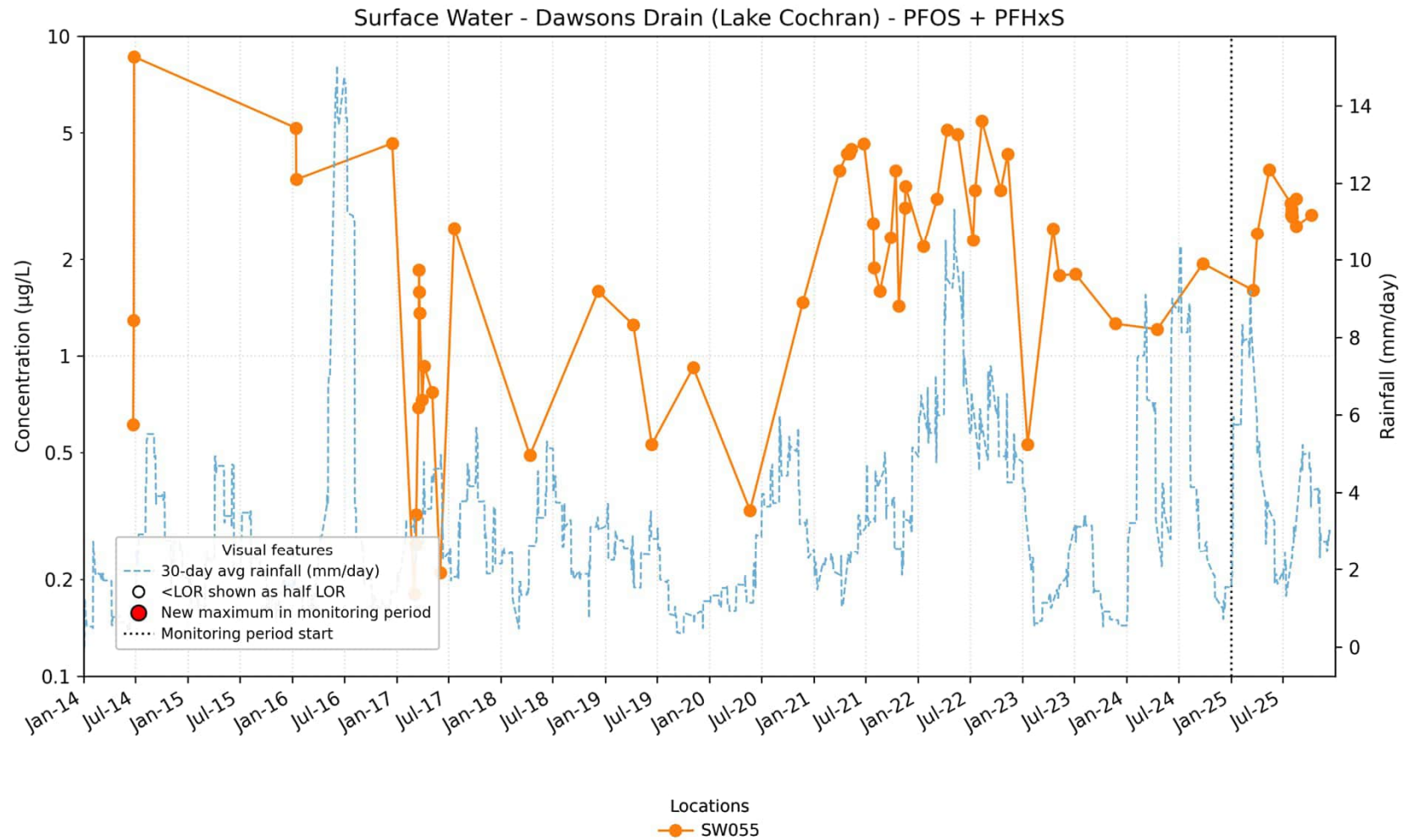
Graph G130 - Temporal Trend



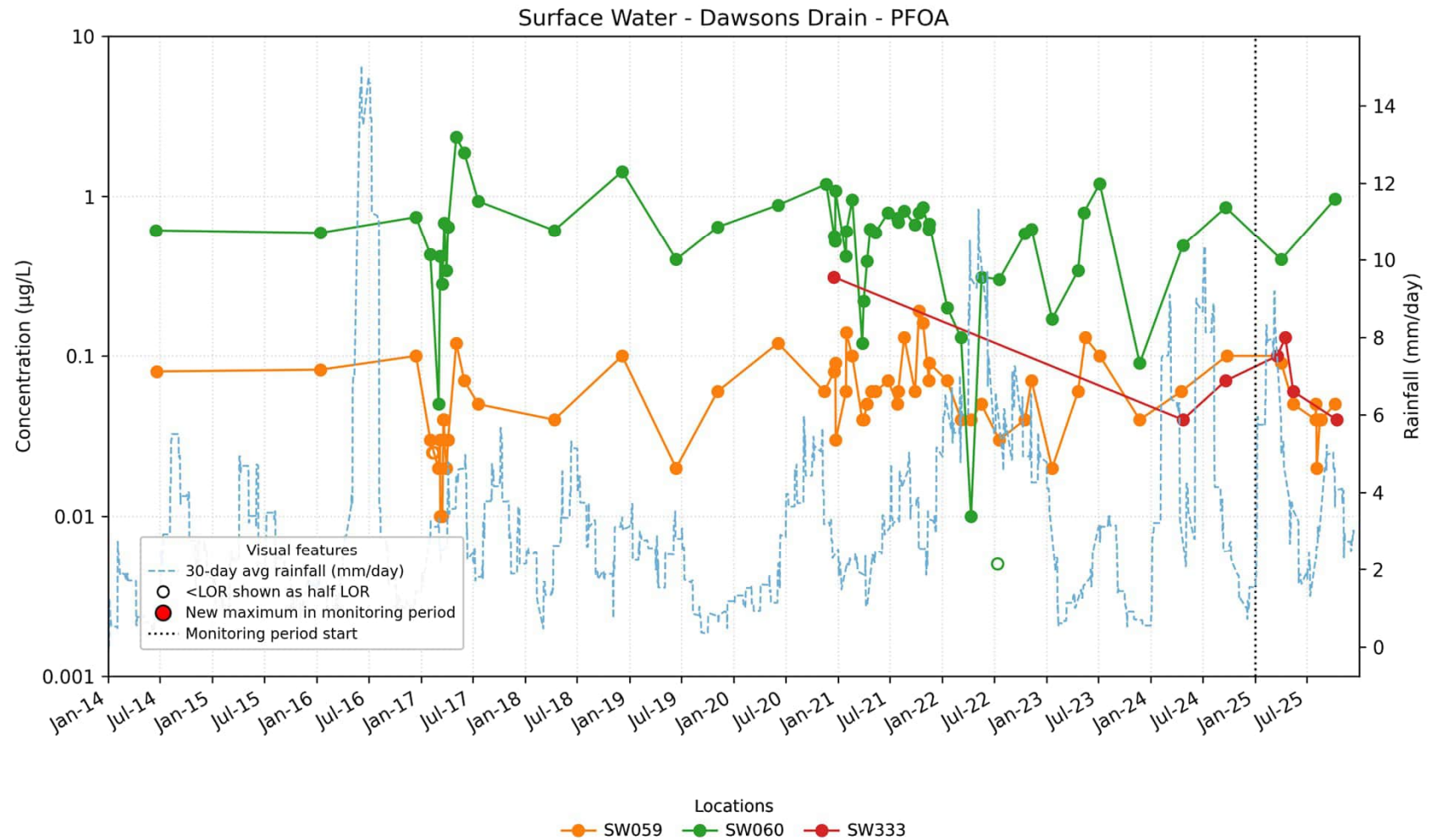
Graph G131 - Temporal Trend



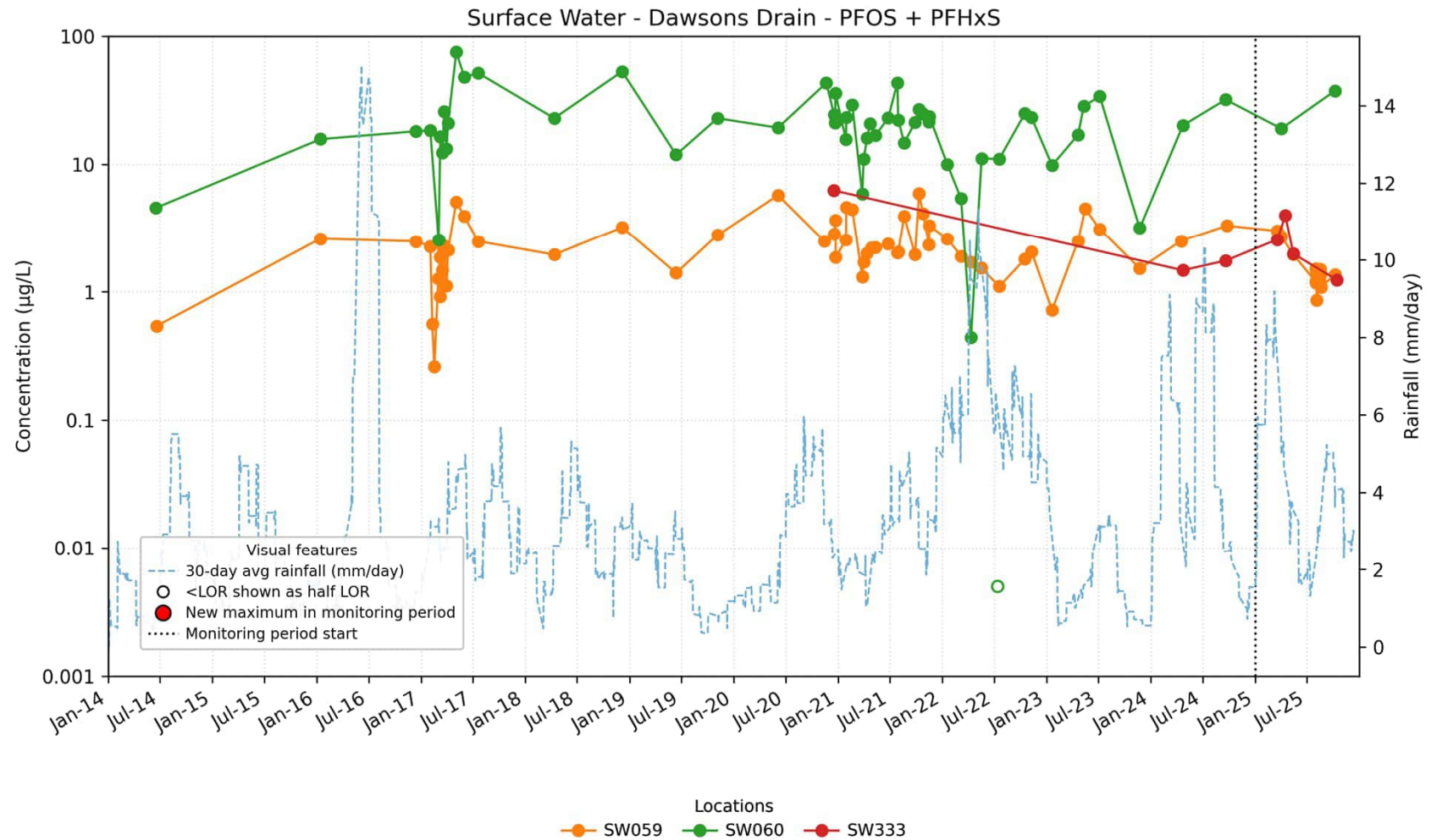
Graph G132 - Temporal Trend



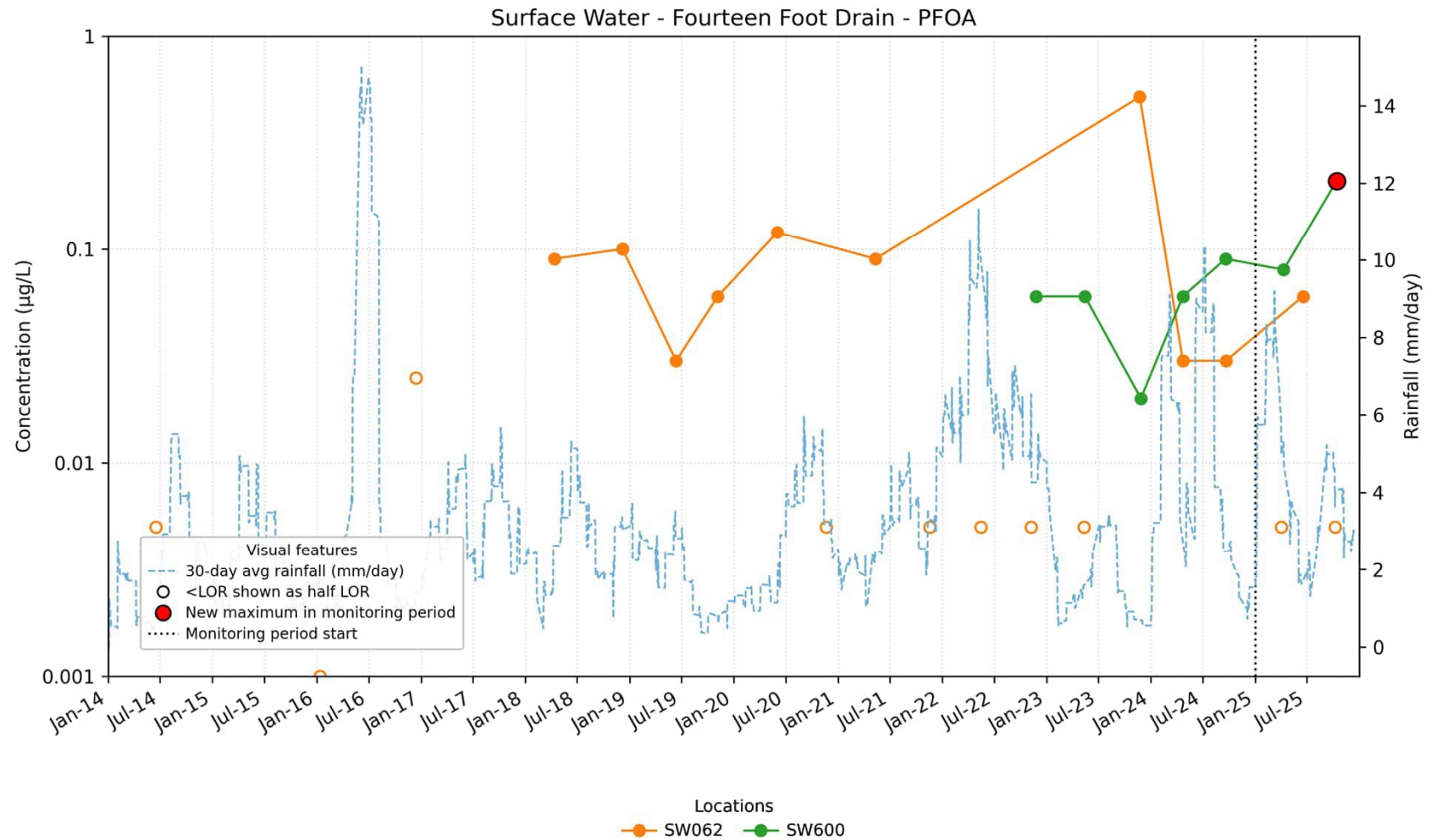
Graph G133 - Temporal Trend



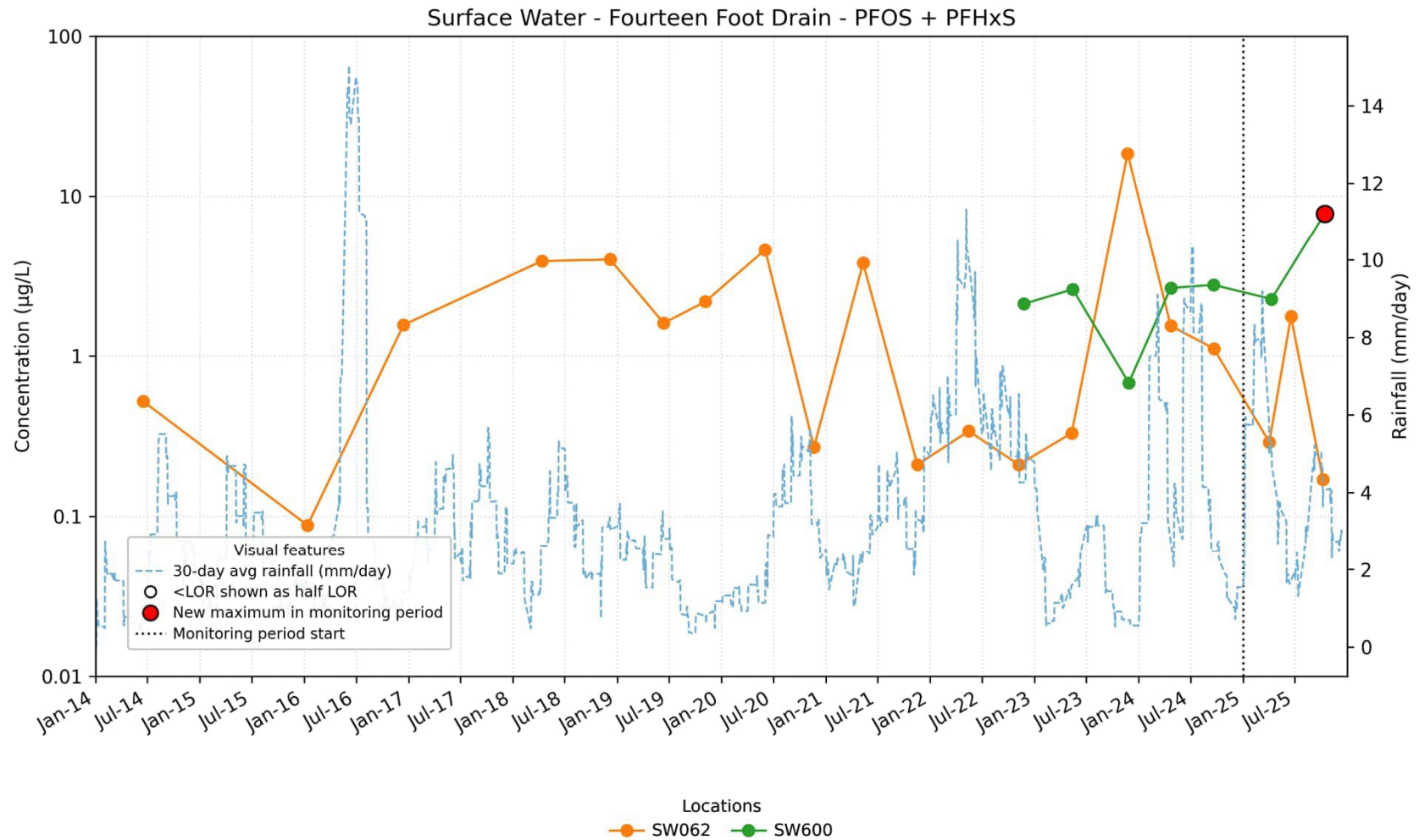
Graph G134 - Temporal Trend



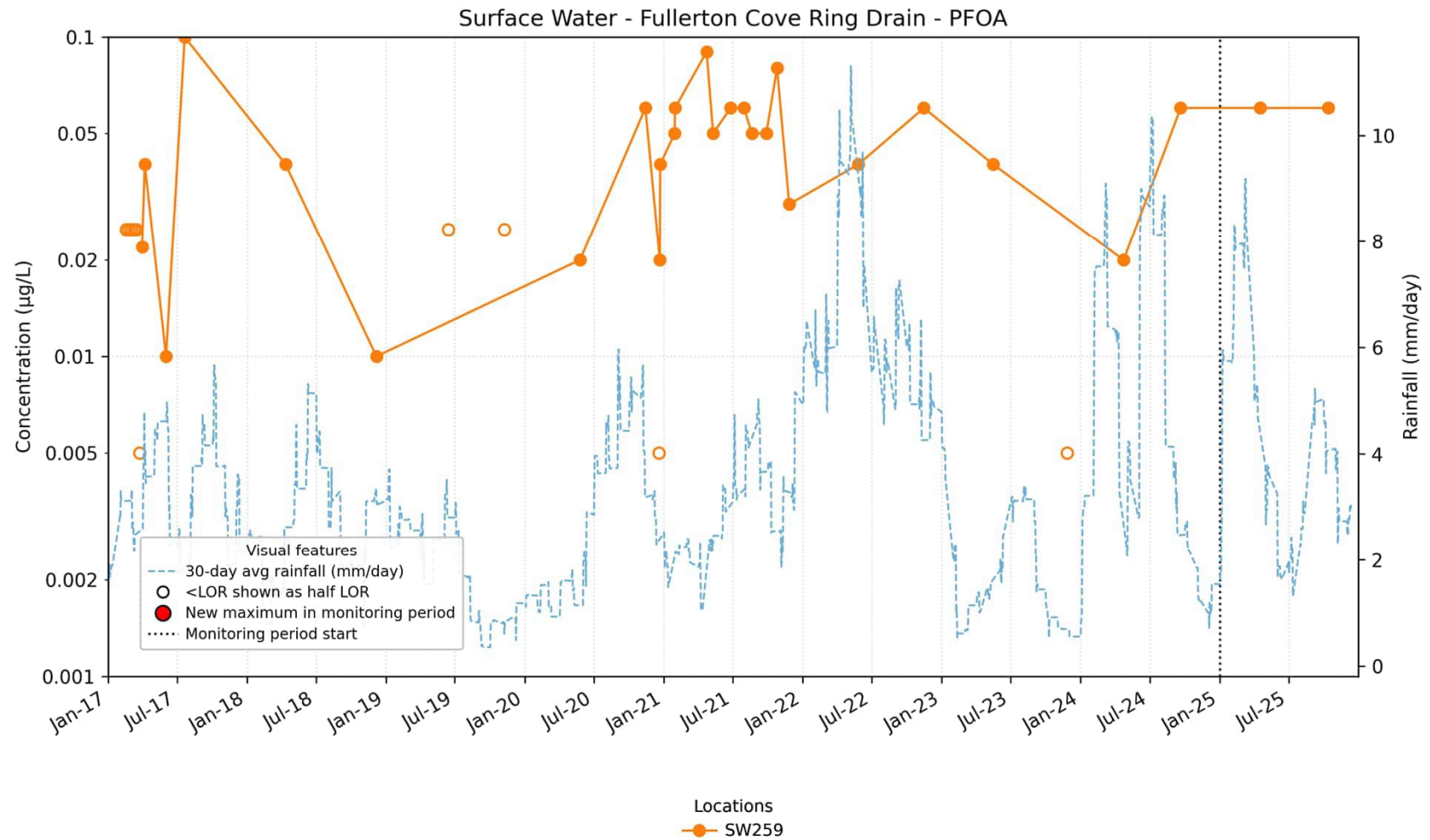
Graph G135 - Temporal Trend



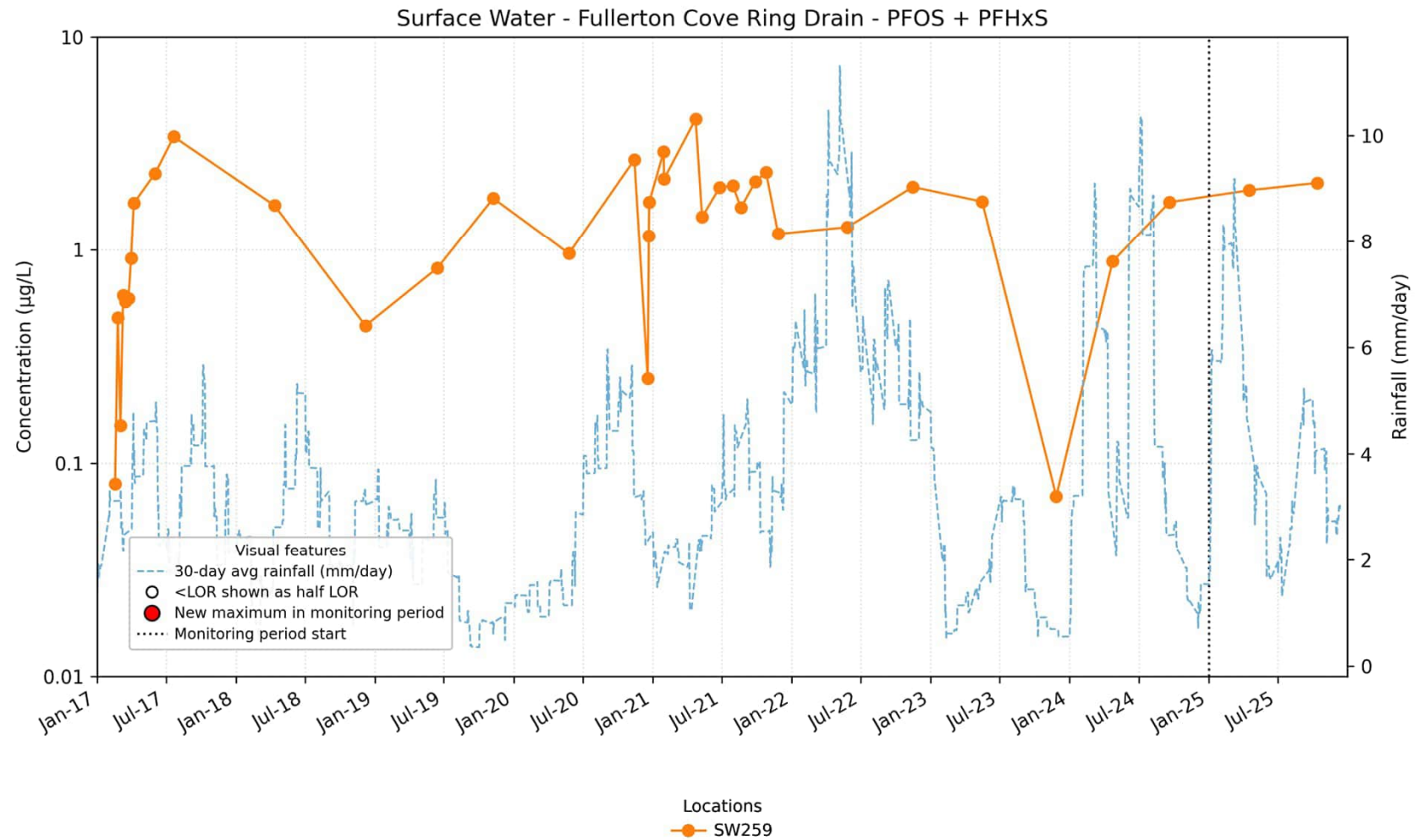
Graph G136 - Temporal Trend



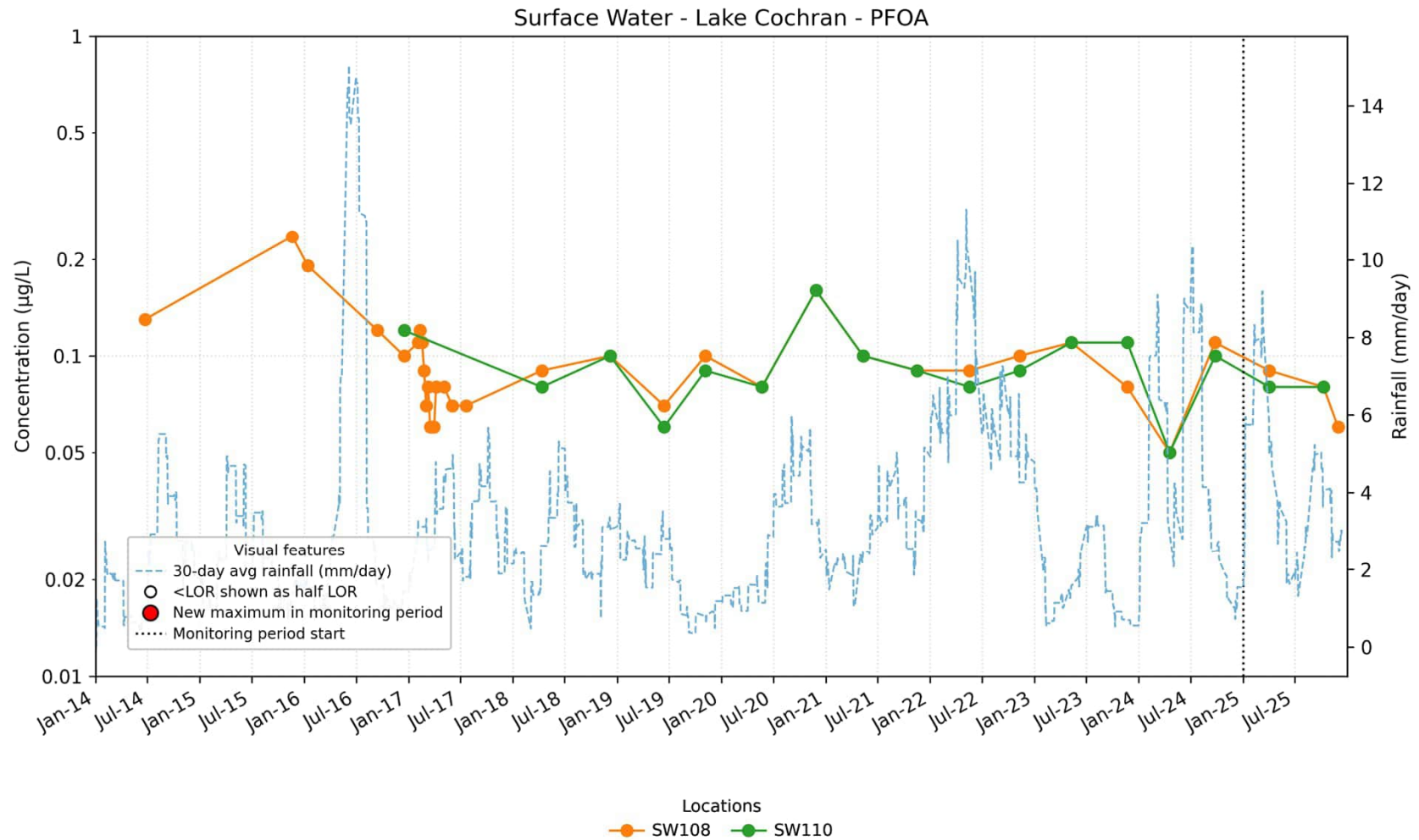
Graph G137 - Temporal Trend



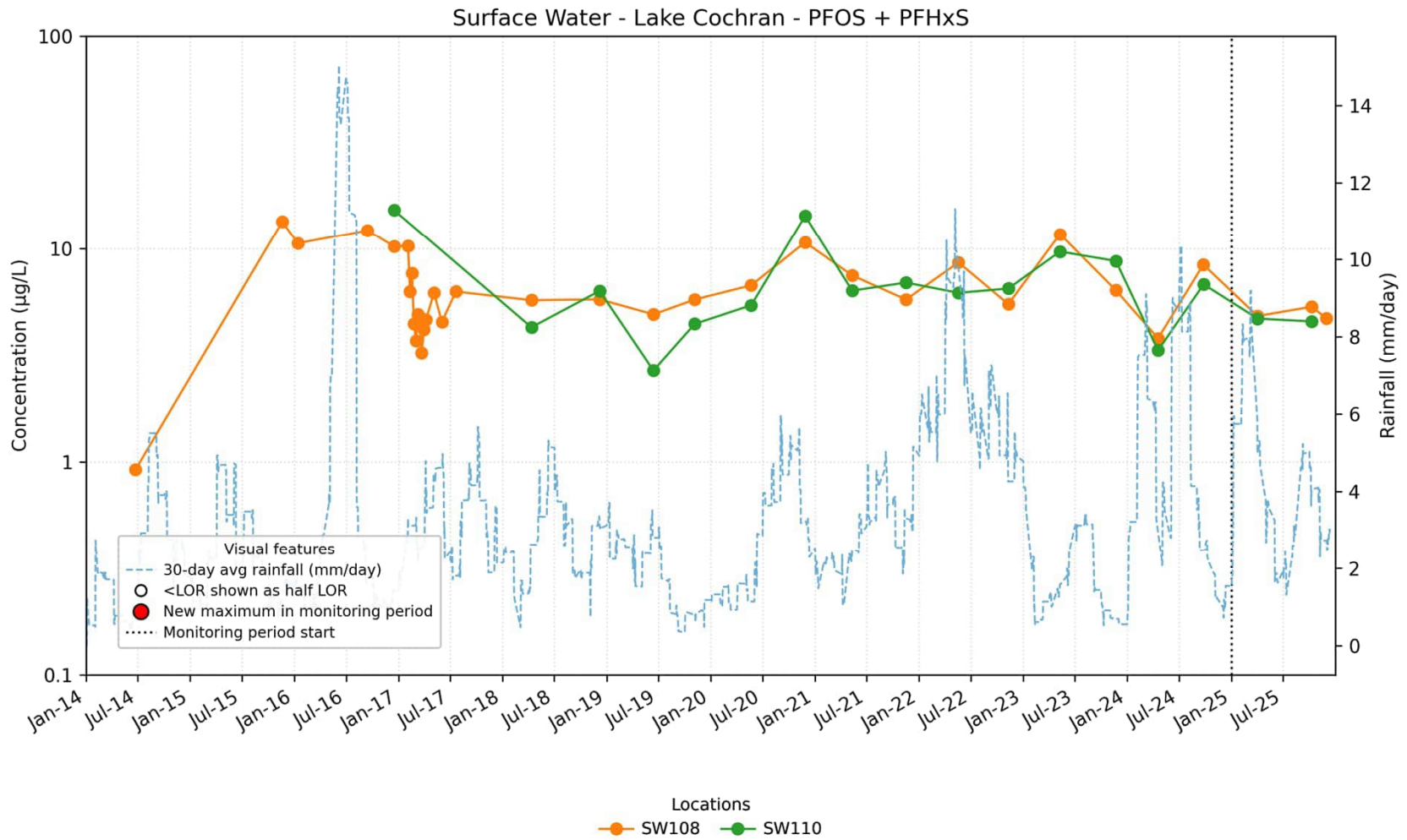
Graph G138 - Temporal Trend



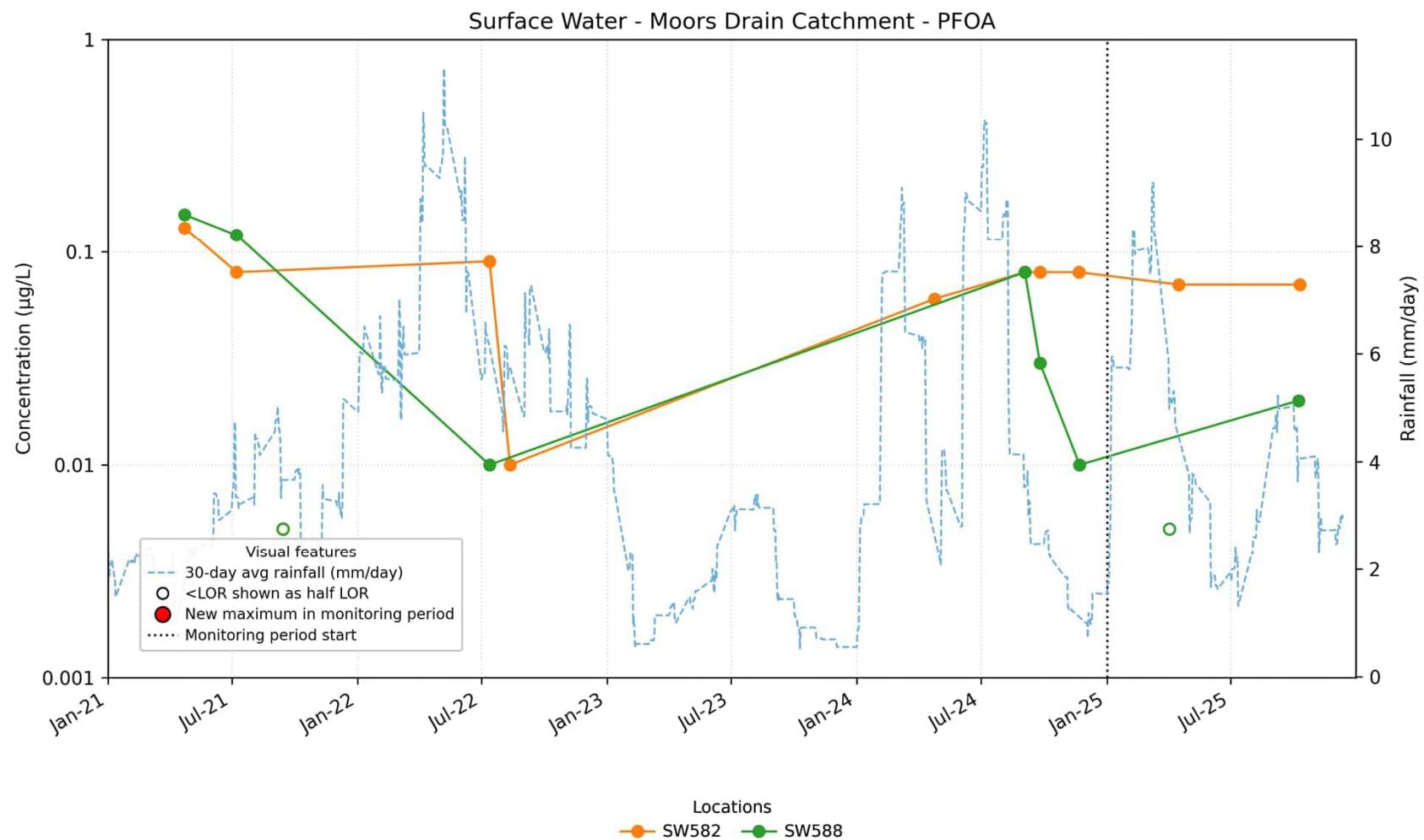
Graph G139 - Temporal Trend



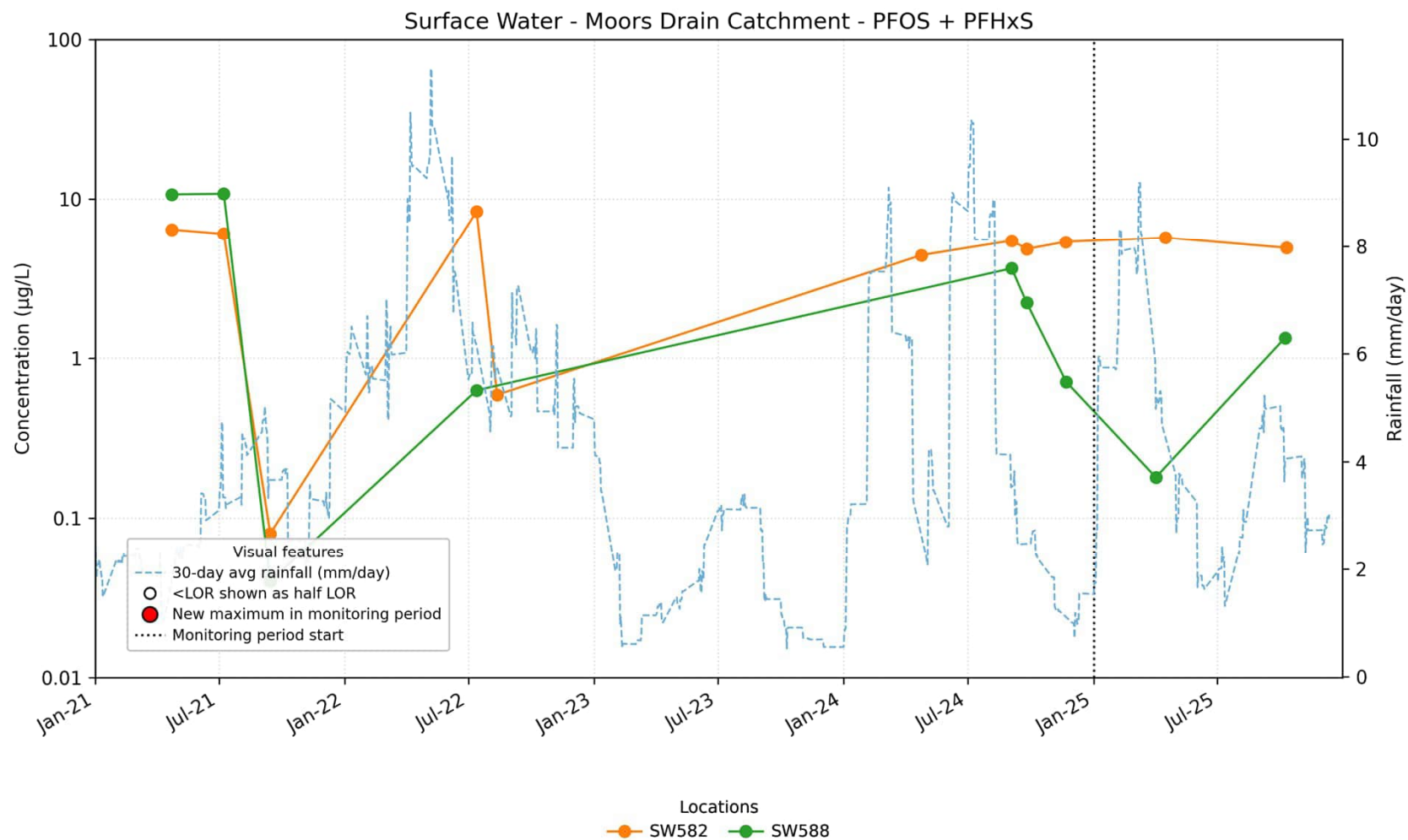
Graph G140 - Temporal Trend



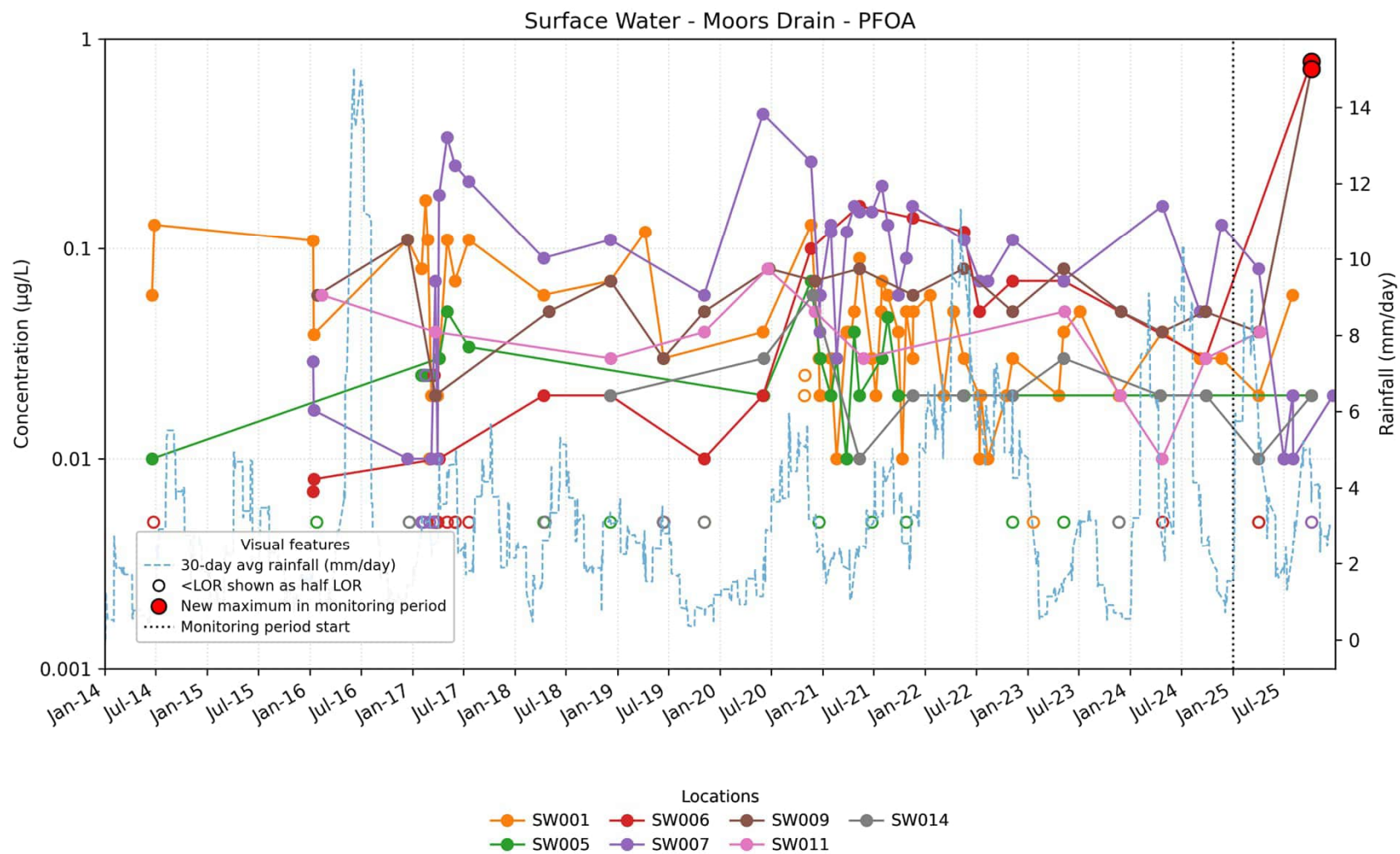
Graph G141 - Temporal Trend



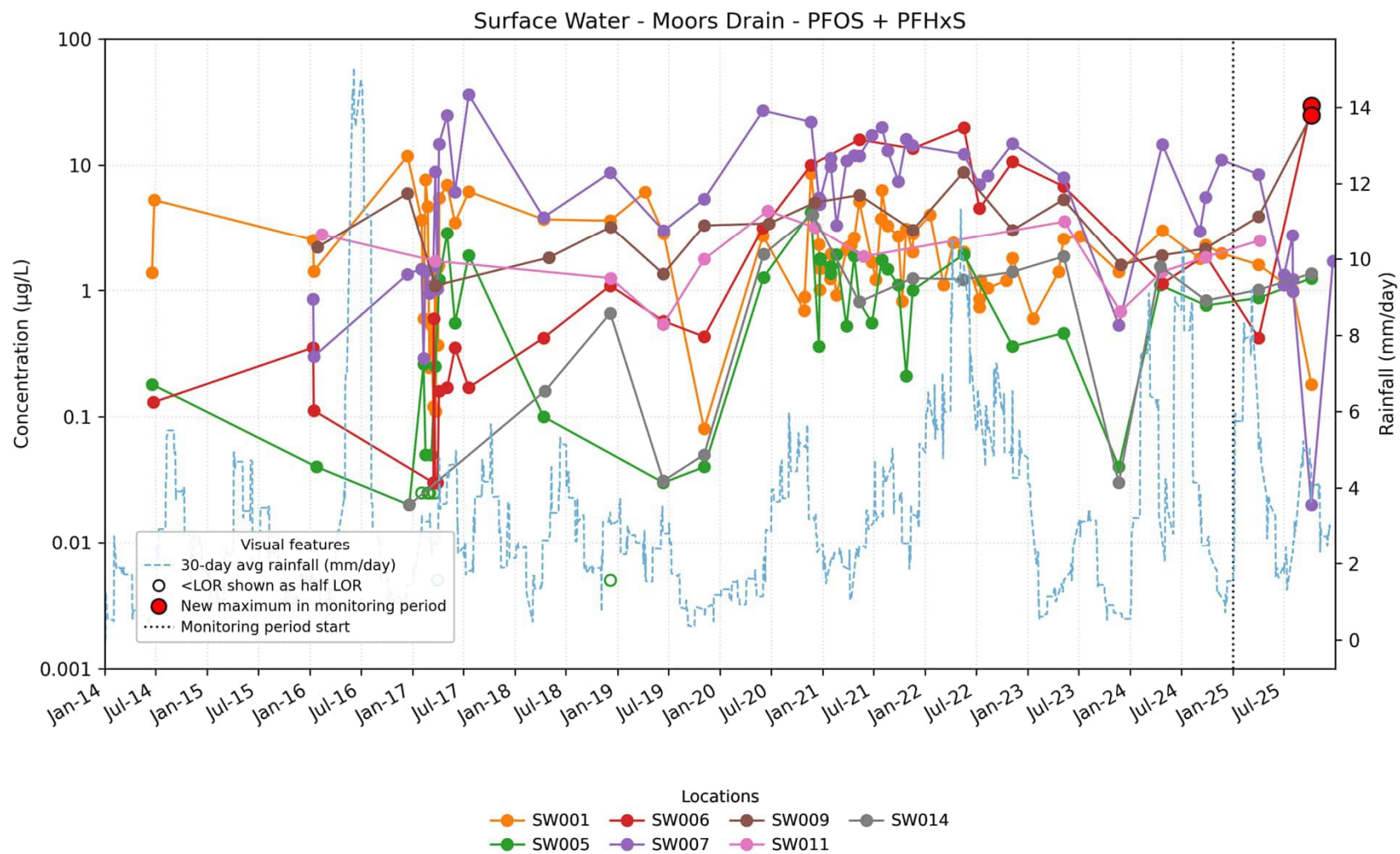
Graph G142 - Temporal Trend



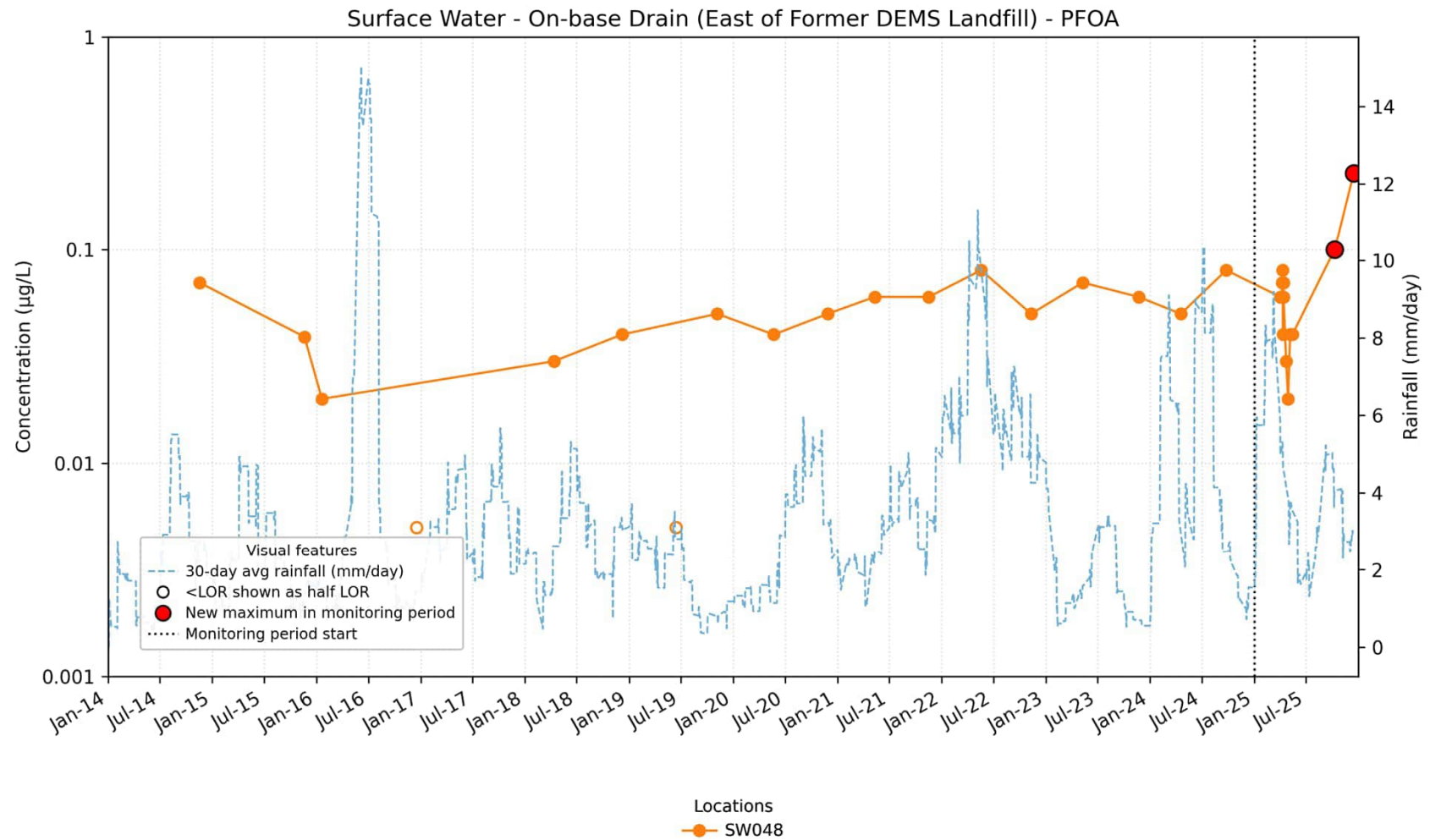
Graph G143 - Temporal Trend



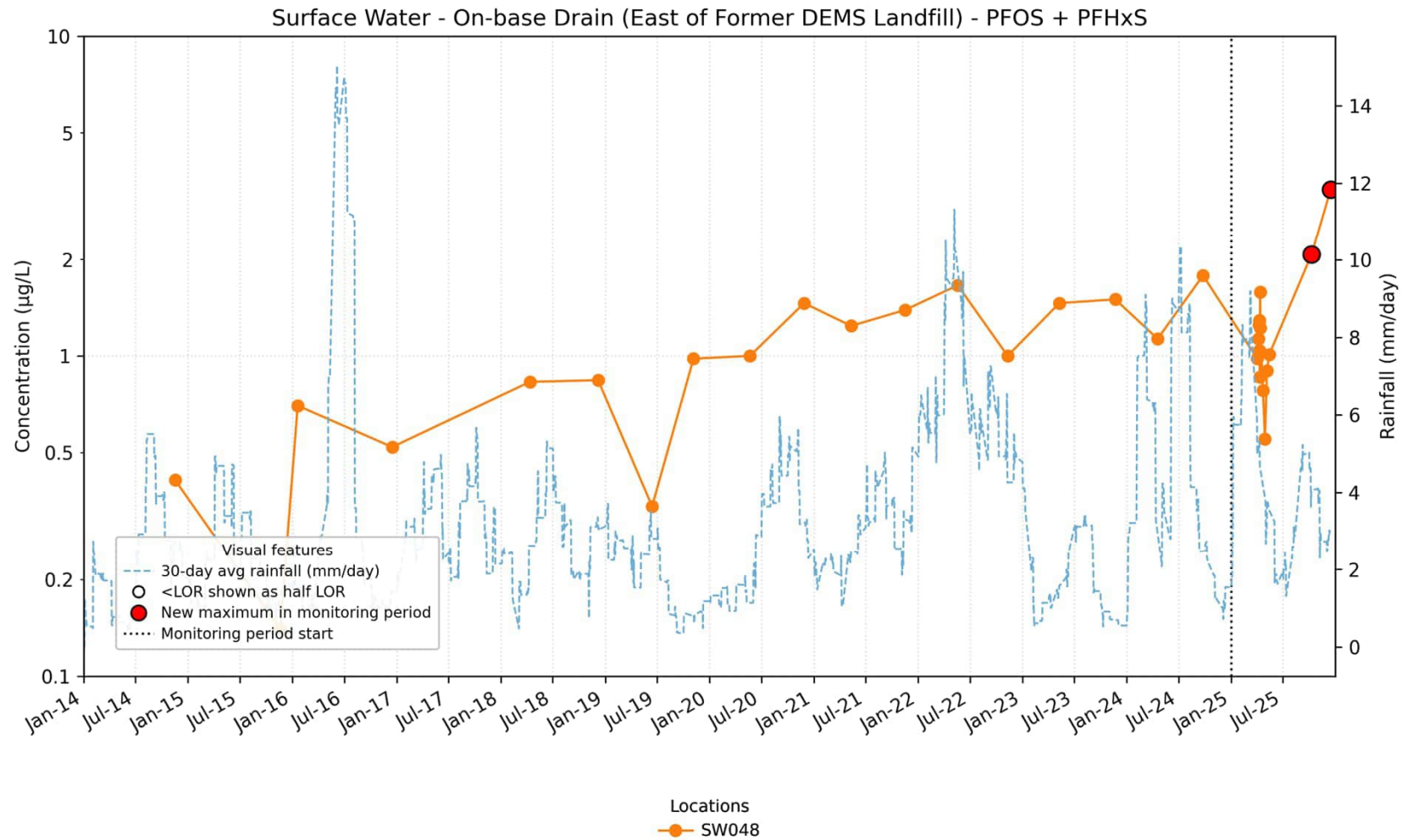
Graph G144 - Temporal Trend



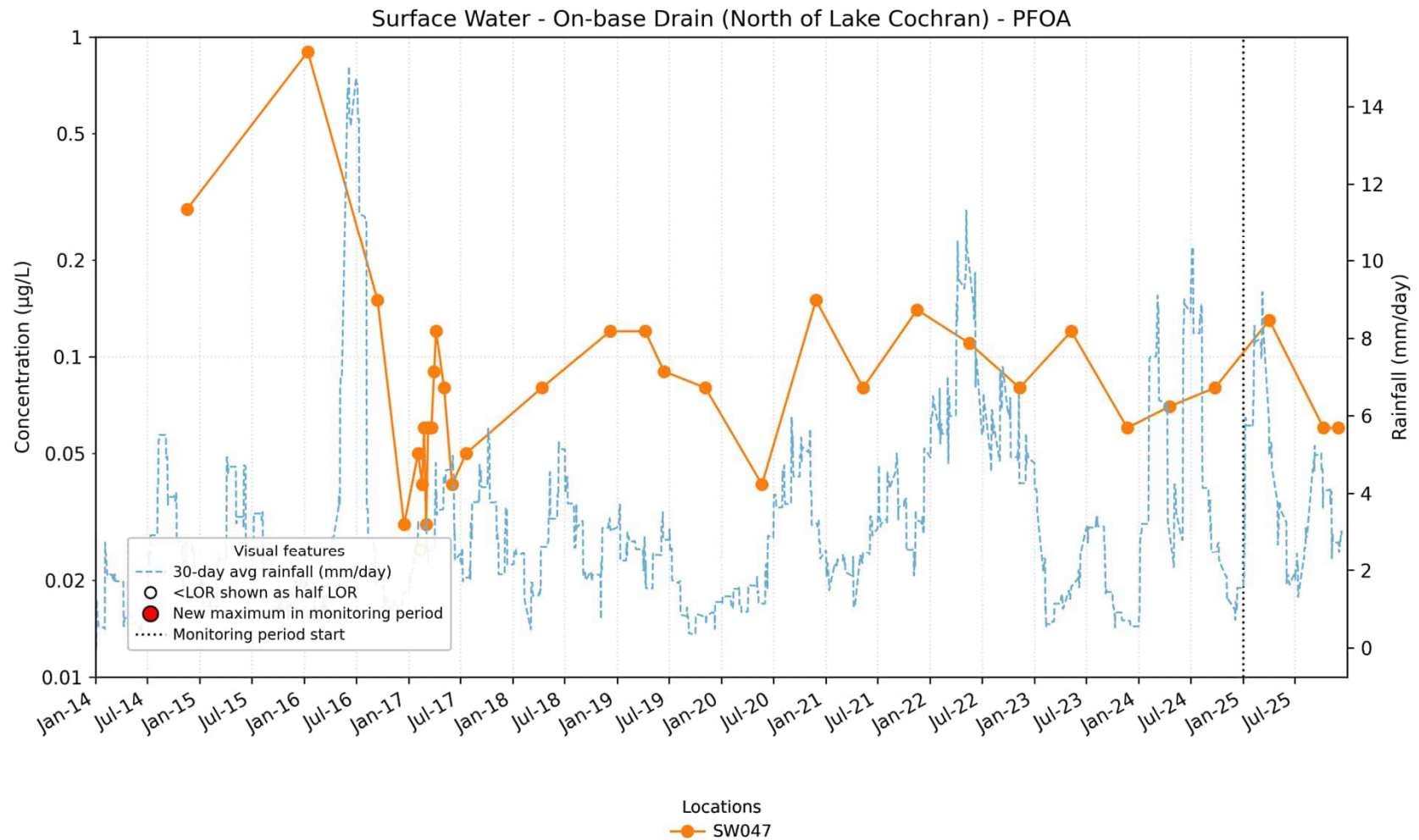
Graph G145 - Temporal Trend



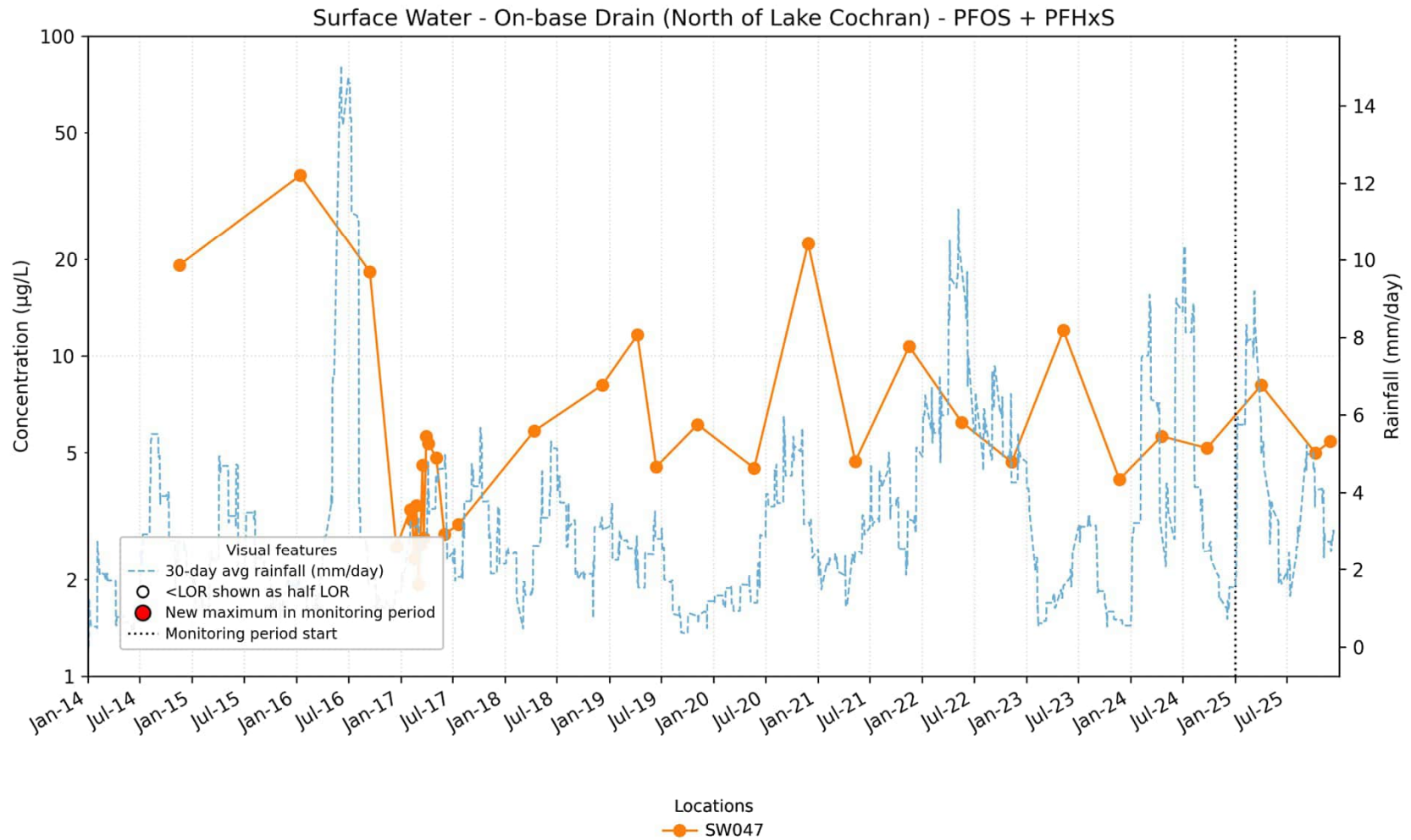
Graph G146 - Temporal Trend



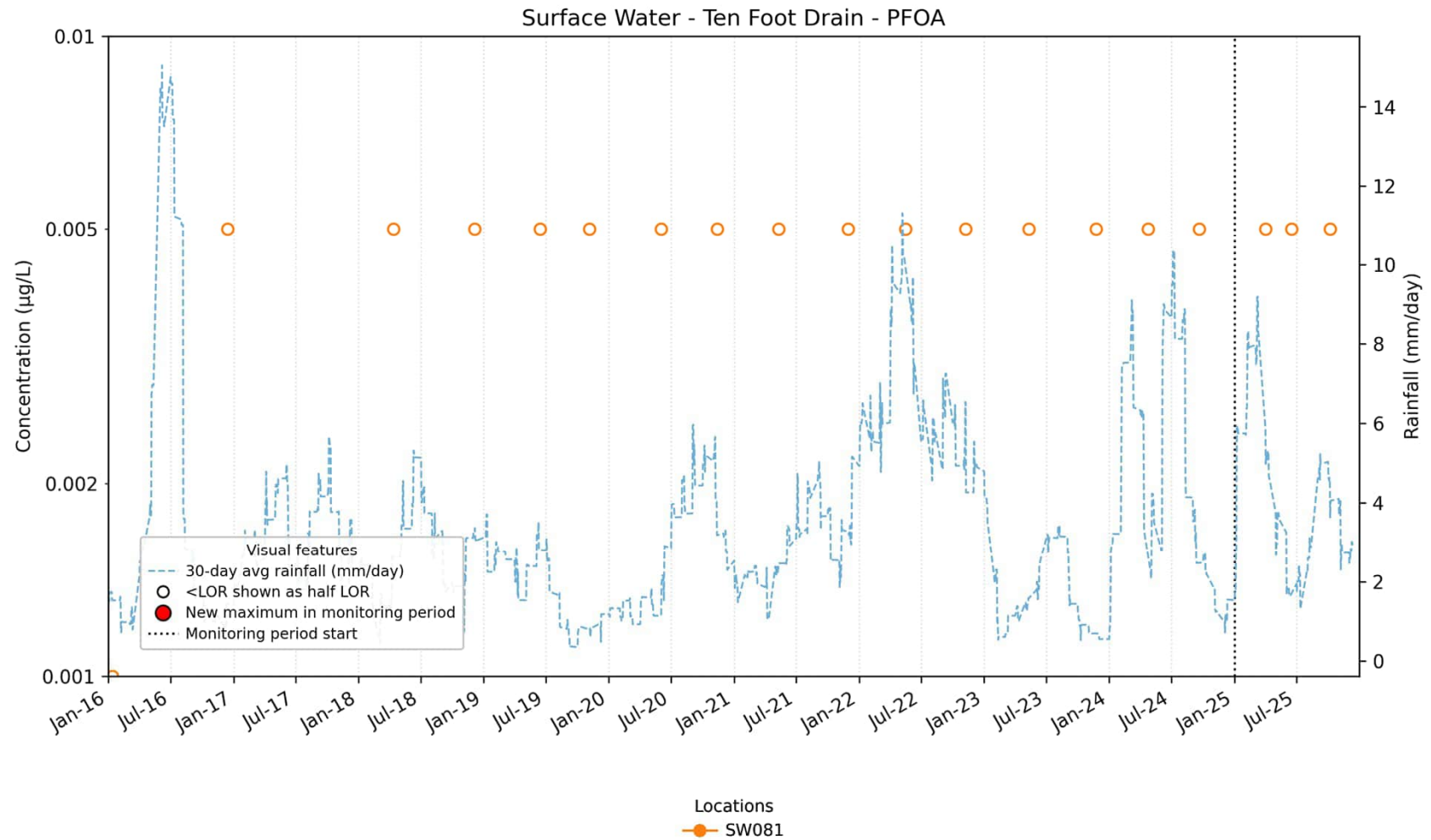
Graph G147 - Temporal Trend



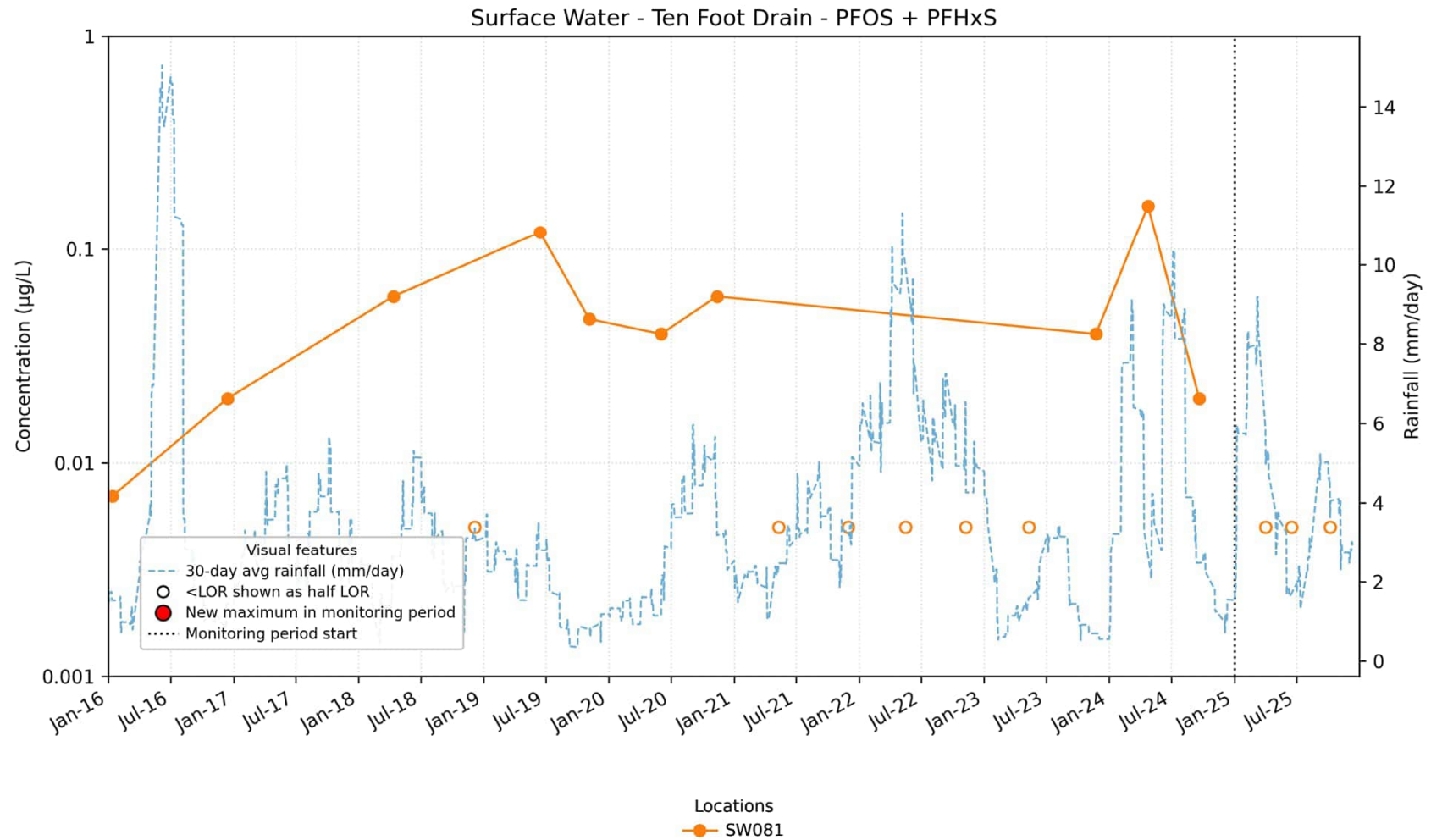
Graph G148 - Temporal Trend



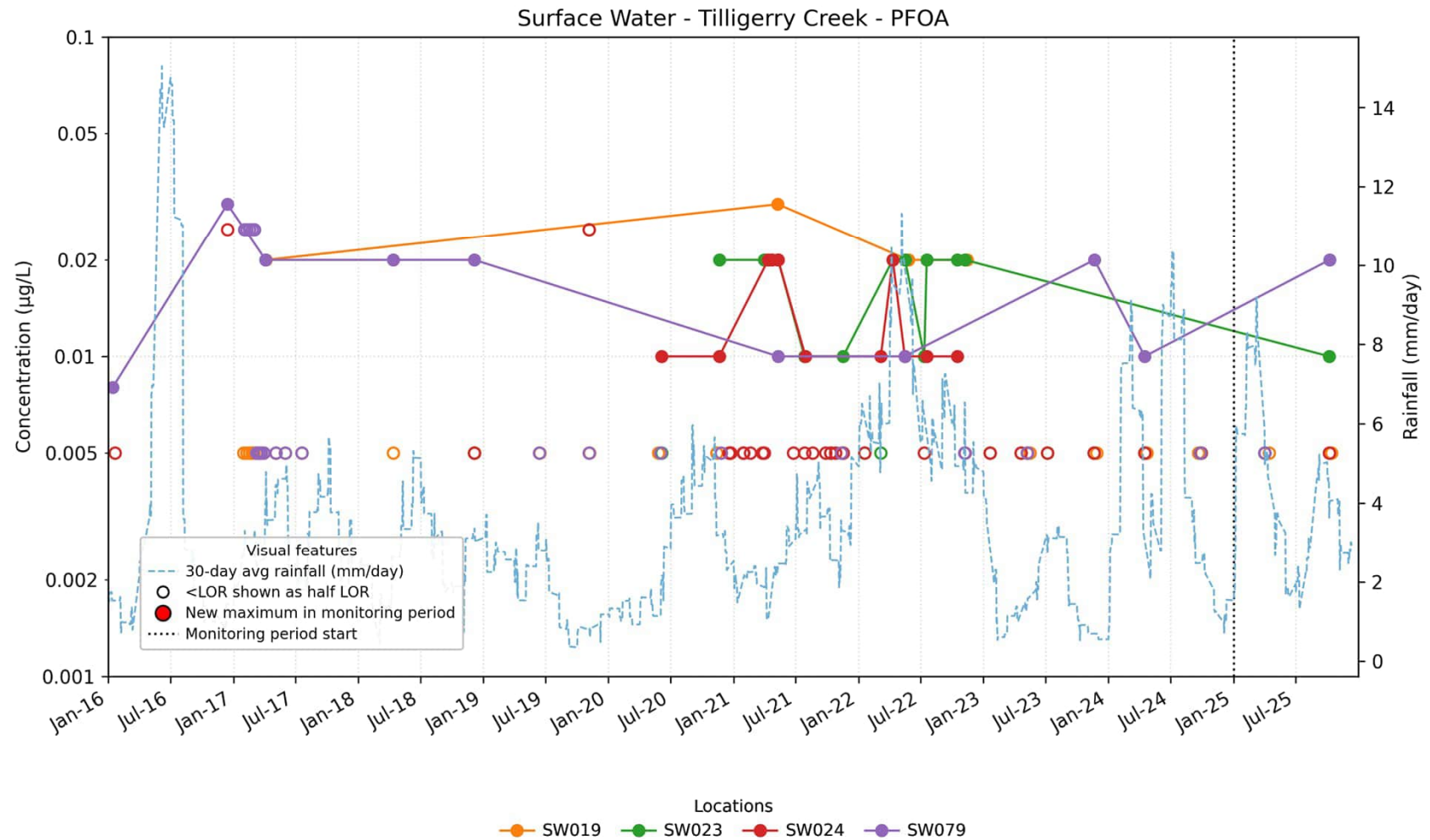
Graph G149 - Temporal Trend



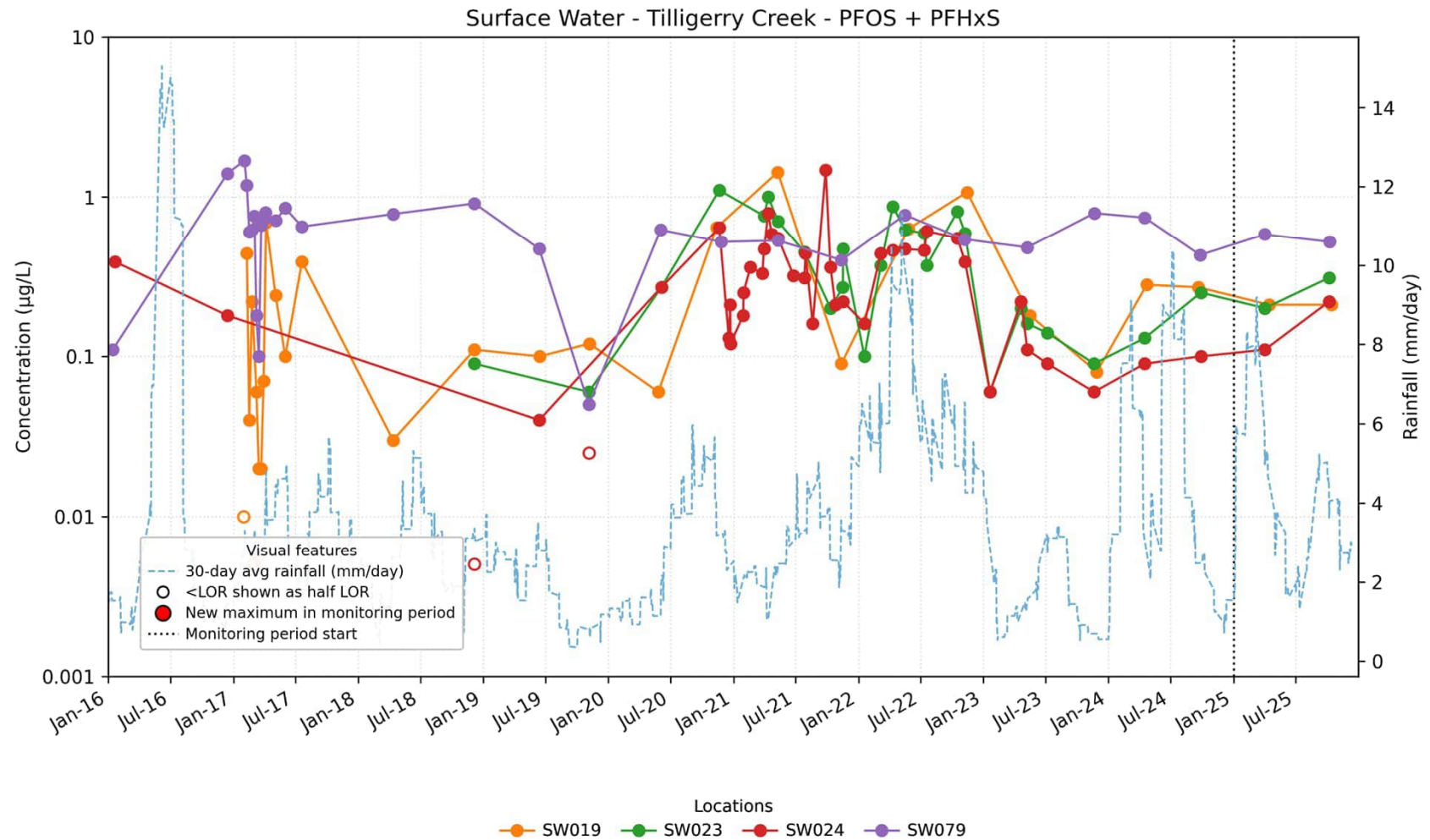
Graph G150 - Temporal Trend



Graph G151 - Temporal Trend

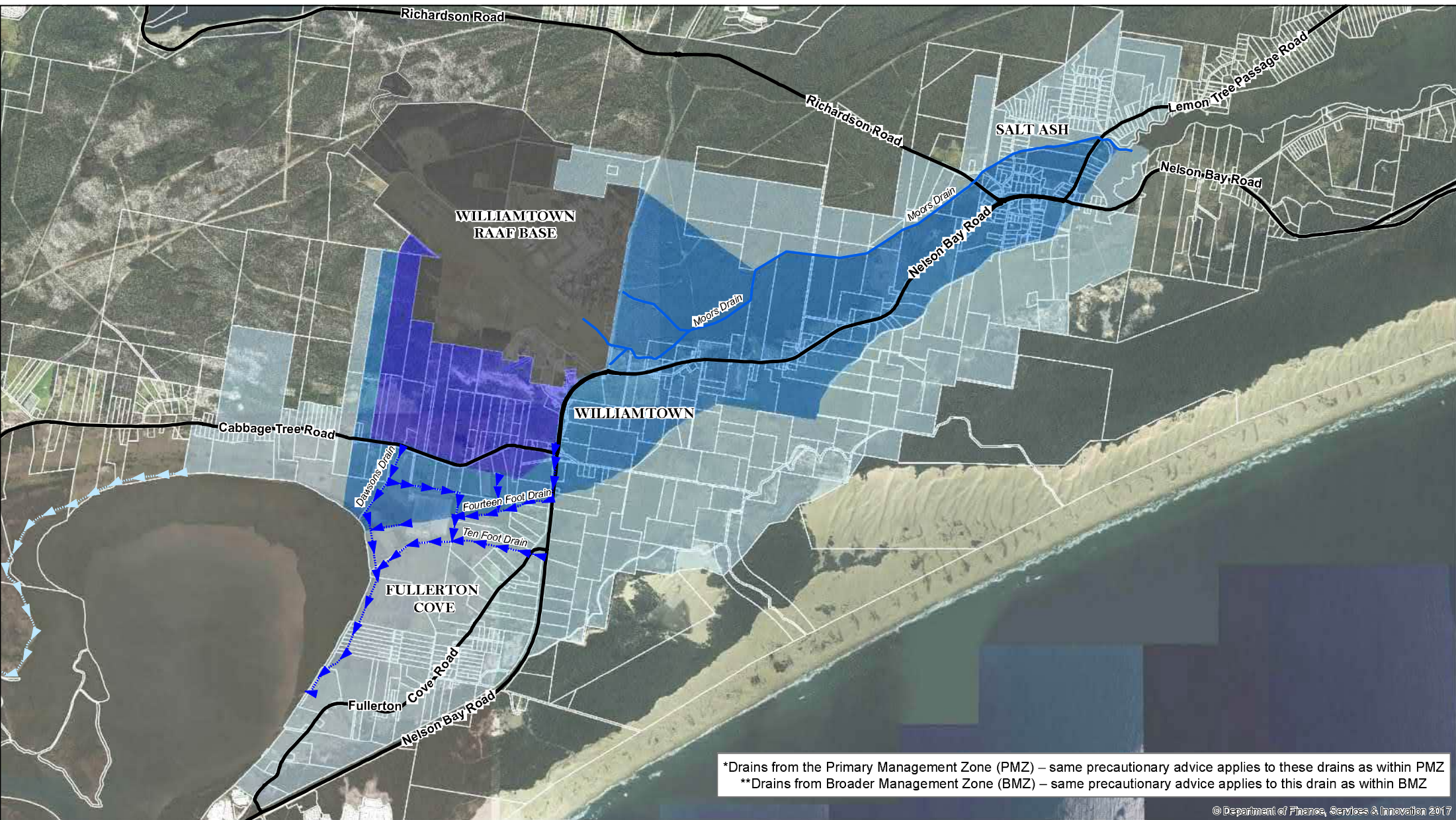


Graph G152 - Temporal Trend



Appendix D

Management Area



*Drains from the Primary Management Zone (PMZ) – same precautionary advice applies to these drains as within PMZ
**Drains from Broader Management Zone (BMZ) – same precautionary advice applies to this drain as within BMZ

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	Primary Management Zone		Roads
	Secondary Management Zone		Moors Drain
	Broader Management Zone		Drains from Primary Management Zone*
	Williamtown RAAF Base		Drains from Broader Management Zone**
	Property Boundary		

Williamtown Management Area

Map Created: 19/12/2017
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This map is not guaranteed to be free from error or omission.
EPA and its employees disclaim liability for any act done on the
information in the map and any consequences of such acts or omissions.
Base imagery: Nearmap 1/ November 2017

N

0 1,000 2,000 Metres

Coordinate System: GDA 1994 MGA Zone 56



Williamtown Management Area Map

The Williamtown Management Area comprises three zones:

- **Primary Management Zone** – this area has significantly higher levels of PFAS and therefore the strongest advice applies.
- **Secondary Management Zone** – this area has some elevated levels of PFAS.
- **Broader Management Zone** – the topography and hydrology of the area means PFAS detections could occur now and into the future.

Each zone has tailored precautionary advice for residents to minimise exposure to PFAS originating from the RAAF Base Williamtown.

The map is based on many sources of information, including:

- The Defence Human Health Risk Assessment monitoring data (released 5 December 2017)
- The location of drainage lines, creeks and other surface water features
- The height of land above sea level
- The location of property boundaries and roads
- Surface water and groundwater flow information based on actual measured data, and modelled data for where contamination may flow in the future.

The map also shows drains leading from the Primary Management Zone (marked as dark blue arrows) and Moors Drain in the Secondary Management Zone (marked with a blue line). The precautionary advice for the area in which the drain is located applies.

Following feedback from the community, the EPA has been working with a group of water experts and the Williamtown Community Reference Group to improve the maps for the various management zones:

- Property boundaries have been overlaid to easily identify individual properties.
- Names of main roads have been included for easy reference
- The three zones within the Management Area are now identified by three shades of blue, representing the concentrations of PFAS detected. This also improves ease of access for visually-impaired people.
- There are now three close-up versions of Fullerton Cove, Williamtown and Salt Ash

Appendix E

Supporting maps



KEY

RAAF Base Williamtown

NSW EPA Investigation Area

State Conservation Area

Off-Site Open Channel

Risk Zone A

Risk Zone B

Risk Zone C

Risk Zone D

AECOM

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SHEET
1 of 1

TITLE
Figure F19: Risk Zones

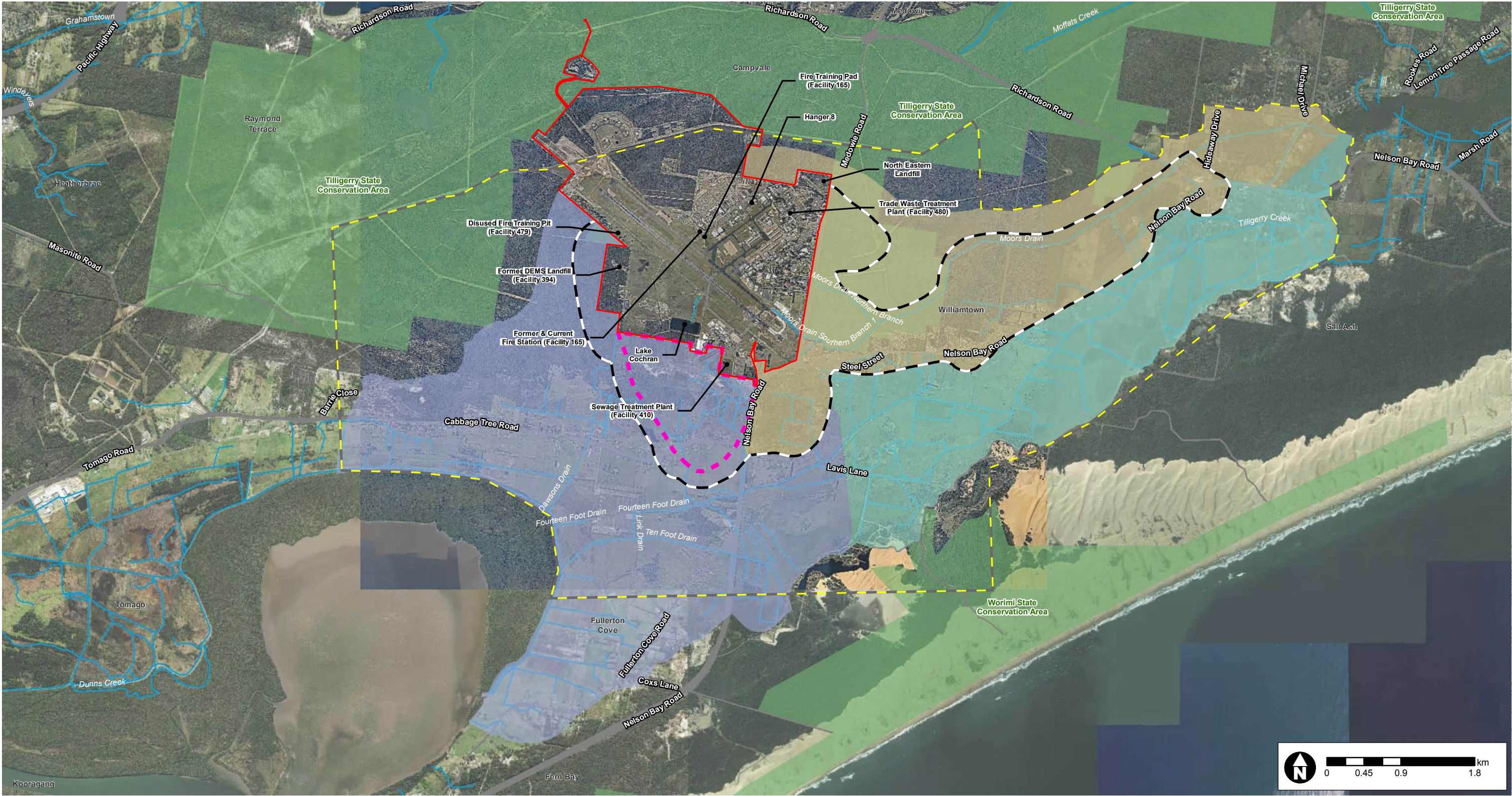
PROJECT
RAAF BASE WILLIAMTOWN STAGE 2B ENVIRONMENTAL
INVESTIGATION
OFF-SITE HUMAN HEALTH RISK ASSESSMENT – 2017

CLIENT
DEPARTMENT OF DEFENCE

-b-b-Disclaimer-b-b-

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suitability or fitness for purpose in relation to the map content.



KEY

- RAAF Base Williamtown
- NSW EPA Investigation Area
- State Conservation Area
- Off-Site Open Channel

Groundwater Areas

- Eastern Area
- Southern Area

Surface Water Regions

- Region 1
- Region 2
- Region 3

AECOM

SCALE
1:46,000

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TITLE
Figure F2: Assessment Areas and Regions Considered in 2017 HHRA

PROJECT
RAAF BASE WILLIAMTOWN STAGE 2B ENVIRONMENTAL INVESTIGATION
OFF-SITE HUMAN HEALTH RISK ASSESSMENT – 2017

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SHEET
1 of 1

COORDINATE SYSTEM
GDA 1994 MGA Zone 56

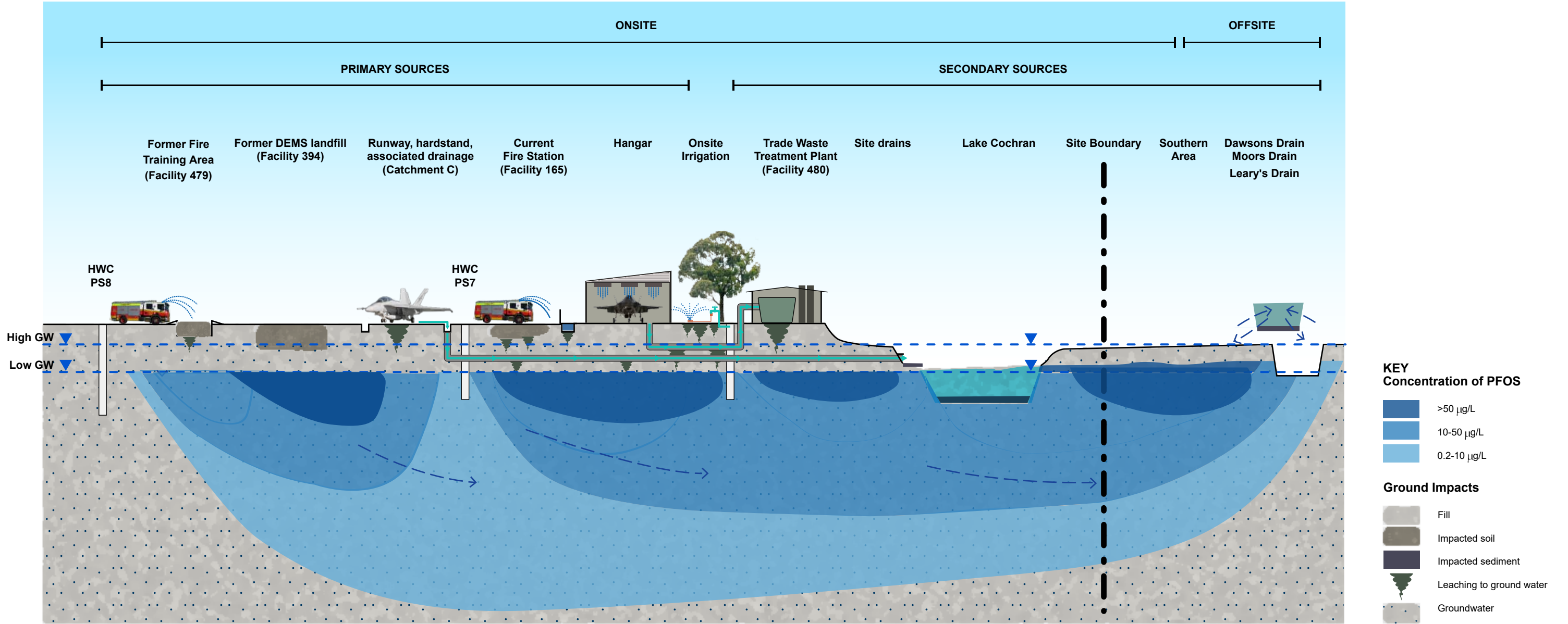
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FIGURE
A3

Appendix F

Conceptual Site Model

APPENDIX F Conceptual Site Model



Source	Former AFFF Training (Soil excavated, groundwater treatment ongoing)	Not a significant source	Former AFFF EmergencyResponse	Legacy Soil Impact from past training	Former Foam Discharge in Hangars	Spillage/overflow	No longer a significant ongoing source
Migration Pathway	Soil Impact Leaching to groundwater Groundwater migration Impact to vegetation	Groundwater impacted	PFAS Runoff to site surface water drains Sorbtion/leaching from pavements	PFAS Runoff to surface water drains Surface water leaching and runoff NB. Current system no discharge: water captured and treated. Groundwater ingress to drainage network when High groundwater levels	Foam / water runoff to trade waste drainage to Trade Waste Treatment Plant (Facility 480)	Treated water still containing PFAS discharged to Sewerage Treatment Plan (Facility 410) Leaching to groundwater Surface water losses from drainage and trade waste network Groundwater ingress to drainage network	Drain leakage to groundwater when water table is low (losing drains) Inflow of contaminated groundwater into drains when water table is high (gaining drains) Flow of impacted surface water and losses from drainage network Groundwater migration and ingress to drainage network
Receptor	Site fauna Site personnel HWC bores	Site fauna Site personnel	Site fauna Site personnel	Site personnel	Site personnel	Site fauna Site personnel	Aquatic and terrestrial biota i.e. fish, eels, invertebrates, amphibians, birds, mammals (drinking)

AECOM

Appendix G

Sampling and Analysis Quality Plan

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Sampling and Analysis Quality Plan

PFAS OMP - RAAF Base Williamtown

25-Sep-2025
PFAS Ongoing Monitoring Program - RAAF Base Williamtown
Doc No. 20250925_OMP002_WLM_SAQP_RevD

Art by
**Bianca
Gardiner
Dodd**

DRAFT

Sampling and Analysis Quality Plan

PFAS OMP - RAAF Base Williamtown

Client: Department of Defence

ABN: 68 706 814 312

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Quality Information

DocumentSampling and Analysis Quality Plan

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Date25-Sep-2025

Originator

Checker/s

Verifier/s

Revision History

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			Name/Position	Signature
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B	21-Mar-2025	Draft		
C	16-Sep-2025	Draft		
D	25-Sep-2025	Draft		

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Appendix D PFAS Analytical Suite

D

DRAFT**List of Acronyms**

Acronym	Term
ADWG	Australian Drinking Water Guidelines
AECOM	AECOM Australia Pty Ltd
AFFF	Aqueous Film Forming Foam
ALS	Australian Laboratory Services
ASC NEPM	Assessment of Site Contamination National Environment Protection Measure
ASTM	American Society for Testing and Materials
BoM	Bureau of Meteorology
CoC	Chain of Custody
CSM	Conceptual Site Model
DEMS	Demolition of Explosive Munitions Site
DO	Dissolved Oxygen
DoH	Department of Health
DQI	Data Quality Indicator
DQO	Data Quality Objective
EC	Electrical Conductivity
EDD	Electronic Data Deliverables
EDMS	Environmental Data Management System
EPA	Environment Protection Authority
ERA	Ecological Risk Assessment
ESA	Environmental Site Assessment
EScIS	Earth Science Information Systems
FFTA	Former Fire Training Area
FSANZ	Food Standards Australia New Zealand
HEPA	Heads of Environment Protection Authority
HHRA	Human Health Risk Assessment
HWC	Hunter Water Corporation
LCMS	Liquid Chromatography Mass Spectrometry
LGA	Local Government Area
LOR	Limit of Reporting
MW	Monitoring Well
NATA	National Analytical Testing Authority
NEMP	National Environmental Management Plan
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council

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Acronym	Term
NMI	National Measurement Institute
NSW	New South Wales
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
PFAS	Per- and poly-fluoroalkyl substances
PFHxS	Perfluorohexane sulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PMAP	PFAS Management Area Plan
QA/QC	Quality Assurance and Quality Control
Redox	Reduction-oxidation
RPD	Relative Percentage Difference
SAQP	Sampling and Analysis Quality Plan
SD	Sediment
SOP	Standard Operating Procedure
SW	Surface Water
SWL	Standing Water Level
TSCA	Tilligerry State Conservation Area
US EPA	United States Environmental Protection Agency
WQM	Water Quality Meter

List of Units

Units	Term
°C	Degrees Celsius
µg/L	Micrograms per litre
µS/cm	MicroSiemens per centimetre
g	Gram
km	Kilometre
L	Litre
m	Metre
mAHD	Metre relative to Australian Height Datum
mbgl	Metre below ground level
mbTOC	Metres below Top of Casing
mg/kg	Milligram per Kilogram
mg/L	Milligrams per litre

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1.0 Introduction

1.1 Preamble

AECOM Australia Pty Ltd (AECOM) has prepared this Sampling and Analysis Quality Plan (SAQP) for the implementation of the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) at RAAF Base Williamtown (the 'base') and the surrounding off-base areas, including the Williamtown Management Area (refer to **Figure 1** in **Appendix A**).

The SAQP supports the *PFAS Ongoing Monitoring Plan – November 2023, RAAF Base Williamtown* (Defence, 2023a), here-in referred to as OMP (Defence, 2023a).

The purpose of the OMP (Defence, 2023a) is to collect adequate data to identify and evaluate:

- spatial, and temporal (including seasonal) variability of PFAS in the environment
- changes to sources, transport pathways and/or receptors, described as a conceptual site model for the base and surrounding areas
- whether risks to human and ecological receptors require review
- the influence that risk management activities at the base, as outlined in the PMAP (Defence, 2023b) have had on PFAS in the environment, and
- whether the identified changes trigger an action and/or review

The data will assist in the timely identification of risks and inform Defence's approach to the management of PFAS, including updates and revisions to the PFAS Management Area Plan (PMAP) (Defence, 2023b).

1.2 SAQP Objectives

The objectives of this SAQP are to:

- define the proposed scope of works in detail
- outline the proposed sampling methodology to be adopted
- outline the proposed quality assurance and quality control (QA/QC) measures to be adopted
- define the data collection requirements for the project.

The scope of works (including the proposed schedule, sampling locations and analysis), sampling methodology and other data collection details are outlined in **Section 4.0**.

1.3 Guidelines and Legislation

The SAQP has been developed with reference to the following guidelines and legislation:

- Australian and New Zealand Guidelines, 2018. *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*
- Department of Defence, 2018. *Contamination Management Manual – Annex L Data Management*. August 2018, Amended June 2021
- Department of Health (DoH), 2017. *Health Based Guidance Values for PFAS for use in site investigations in Australia*. April 2017. This document is based on the works undertaken by Food Standards Australia New Zealand (FSANZ) in 2017 (FSANZ 2017)
- Heads of EPAs Australia and New Zealand (HEPA) 2025. *PFAS National Environmental Management Plan 3.0*. January 2025
- National Environment Protection Council (NEPC), 2013. *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)*

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- National Health and Medical Research Council (NHMRC), 2019. *Guidance on PFAS in Recreational Water*. August 2019
- NHMRC, 2025. *Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy*. October 2011, updated June 2025.
- Standards Australia, 1998. AS/NZ 5667:1998 Water Quality – Sampling. Part 11: Guidance on sampling of groundwaters.

1.4 Background

The previous investigations carried out at the base prior to the implementation of the OMP include the Environmental Site Assessment (ESA) (AECOM, 2017a), the Off-Site Human Health Risk Assessment (HHRA) (AECOM, 2017b) and the Ecological Risk Assessment (ERA) (AECOM, 2018). These reports detailed the nature and extent of PFAS at the base and its associated risks, to both human and ecological receptors from sources of PFAS contamination related to legacy use of AFFF at the base.

The 2019 PMAP (Defence, 2019) was subsequently developed, and supported by the OMP (AECOM, 2019a to 2019c), which was implemented between 2019 and 2023.

In 2023, Defence completed a review of the OMP, which led to the development of an updated OMP (Defence, 2023a) in consultation with the New South Wales Environment Protection Authority (NSW EPA).

To date, the following reports have been prepared under the updated OMP (Defence, 2023a):

- three OMP Sampling Event Reports (AECOM, 2024a, 2024b and 2025b)
- one OMP Ongoing Monitoring Report (AECOM, 2025a)

The PMAP was updated in 2023 (Defence, 2023b), and outlines the risk management actions that Defence has completed, actions currently underway, and actions that may be required in the future to manage PFAS contamination to reduce risks to human health and the environment.

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2.0 Site Setting

2.1 Base Description

The base is located at Medowie Road, Williamtown, NSW, approximately 15 km north of the Newcastle NSW central business district (CBD) and is located in the Port Stephens local government area (LGA), as shown in **Figure 1** in **Appendix A**.

The base has been an active Defence base since 1941 and serves as the headquarters to both the Air Combat Group and the Surveillance and Response Group. In 2014, it was designated as the home base for Australia's F-35 Joint Strike Fighters. The southern side of the base is leased to Newcastle Airport Pty Limited, which operates the commercial Newcastle Airport.

The base comprises 'landside' and 'airside' areas:

- landside areas are partially covered by hardstand and pavement consisting of concrete, asphalt roadways, and contain a large number of low-rise buildings, accommodation properties, workshops, aircraft hangars, fuel storage areas and storage facilities
- airside areas consist of taxiways, aprons and the main runway.

2.2 Base and Management Area Settings

The surrounding land uses of the base comprise rural and semi-rural settlements at Fullerton Cove and Salt Ash, small commercial properties and the Salt Ash Primary School. Tilligerry State Conservation area, managed by National Parks and Wildlife Service (NPSW), immediately borders the base to the west, north and east.

Hunter Water Corporation (HWC) pumping stations and groundwater extraction bore fields are located to the west, north and east of the base.

A summary of the environmental setting of the Management Area is as follows:

- The area experiences average low temperatures around 6°C in July and maximum average temperatures of around 28°C in January.
- The highest monthly rainfall generally occurs between January and June (averaging >100 mm per month), with the lowest rainfall in July to December (averaging 74 mm per month).
- Low lying area associated with the Lower Hunter River. The region is characterised by low sand dunes, sand sheets and estuarine mud flats.
- Relatively flat topography with ground elevation ranging approximately 10 metres Australian Height Datum (m AHD) to low lying areas between Fullerton Cove and Tilligerry Creek with elevations between 1 and 3 m AHD.
- The geology of the base and Management Area comprises unconsolidated sands (Tomago Sand Beds and Stockton Sand Beds) underlain by estuarine sediments (Tilligerry Mud Member).
- The base is surrounded by an interconnected network of drains, rivers, estuaries, reservoirs and coastal waterbodies within the catchment areas of both the Hunter River and Port Stephens estuary. The major elements of the regional surface water drainage network include:
 - Dawsons Drain, the Fourteen Foot Drain and the Ten Foot Drain, which are located to the south of the base and drain into Fullerton Cove.
 - Moors Drain and Tilligerry Creek, which are located to the east and south-east of the base and drain to the north east into the Tilligerry Creek arm of Port Stephens.
- The hydrogeology of the area is characterised by two unconfined sand aquifers:
 - Tomago Sand Beds aquifer located northwest of Tilligerry Creek.
 - Stockton Sand Beds aquifer located between Tilligerry Creek and the Newcastle Bight.

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In November 2017, the NSW Government released the map of the Williamtown Management Area (refer to **Appendix B**), which comprises three zones that have been defined by the NSW government:

- **Primary Management Zone** – this area has significantly higher levels of PFAS detected and, therefore, the strongest precautionary advice applies
- **Secondary Management Zone** – this area has some detected levels of PFAS
- **Broader Management Zone** – the topography and hydrology of the area means PFAS detections could occur now and into the future.

The NSW government noted that each zone has tailored precautionary advice for residents to minimise exposure to PFAS coming from the base.

2.3 Conceptual Site Model

The Conceptual Site Model (CSM) is presented in the PMAP (Defence, 2023b) which summarises the linkages between sources, exposure pathways and receptors, which was based on the assessments of risk exposure pathways.

The CSM identified key primary PFAS source areas (where AFFF containing PFAS is understood to have been used or disposed of in the past) and secondary PFAS source areas (where PFAS has migrated to a location where it creates a concentration of impact). Additional monitoring and investigation has improved the understanding of these source areas to inform the management requirements. The key sources and pathways are as follows:

- Western Region - characterised by the Former Fire Training Area (FFTA) source that is now remediated¹, and a PFAS groundwater plume extending south away from the source.
- Central Region - characterised by ongoing sources at the Former Fire Training Pad / Current Fire Station (Facility 165) and the Sewage Treatment Plant (Facility 410); with PFAS groundwater plumes extending south across the base boundary.
- Eastern Region - characterised by likely sources at the Trade Waste Treatment Plant (Facility 480) and a Former Fuelling Area, with PFAS groundwater plumes extending east across the base boundary, and PFAS impacted surface water discharges to Moors Drain.

The concentrations of PFAS south of the site and north of Cabbage Tree Rd were likely sourced from Lake Cochran, which was impacted when AFFF foams were still in use at the base. However, Lake Cochran is no longer considered a significant ongoing PFAS source to groundwater. PFAS in the central southern plume discharges into Leary's and Dawsons Drain.

The exposure pathways with elevated PFAS exposure identified by the HHRA (AECOM, 2017b), included:

- drinking groundwater (Management Area)
- incidental ingestion of groundwater from indoor use (Primary Management Zone) and outdoor use (Primary and Secondary Management Zones)
- eating home produced eggs, beef and milk (Management Area)
- eating home grown vegetables (Management Area)
- eating high quantities of locally sourced finfish (Hunter River Estuary, Fullerton Cove and Tilligerry Creek)

Ecological receptors who may be exposed to PFAS via the following:

- toxicity to terrestrial and aquatic organisms from direct exposure to PFAS in soil, sediment or surface water. Applies to drains in Management Area, including Dawsons Drain and Moors Drain

¹ Remedial works intended to substantially reduce PFAS mass in soils have been completed, but residual PFAS contamination remains

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- consumption of organisms that have been exposed to PFAS where bioaccumulation is occurring.

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3.0 Data Quality Objectives

3.1 Process

The amended National Environmental Protection Measure (NEPM, Schedule B [2]) *Guideline on Site Characterisation* (2013) specifies that the nature and quality of the data produced in an investigation will be determined by the Data Quality Objectives (DQOs). As referenced by the NEPM, the DQO process is detailed in the United States Environmental Protection Agency (US EPA) *Guidance on Systematic Planning Using the Data Quality Objectives Process* (EPA QA/G-4: EPA/240/B-06/001), February 2006.

The US EPA defines the process as ‘a strategic planning approach based on the Scientific Method that is used to prepare for a data collection activity. It provides a systematic procedure for defining the criteria that a data collection design should satisfy, including when to collect samples, where to collect samples, the tolerable level of decision errors for the study, and how many samples to collect’.

The process of establishing appropriate DQOs is defined according to the following seven steps:

Table 1 The seven steps in defining DQOs

Step	Data Quality Objective Step
1	State the problem – Define the problem that necessitates the study; identify the planning team, examine budget, schedule.
2	Identify the goal of the study – State how environmental data will be used in meeting objectives and solving the problem, identify study questions, define alternative outcomes.
3	Identify information inputs – Identify data and information needed to answer study questions.
4	Define the boundaries of the study – Specify the target population and characteristics of interest, define spatial and temporal limits, scale of inference.
5	Develop the analytic approach – Define the parameter of interest, specify the type of inference, and develop the logic for drawing conclusions from findings.
6	Specify performance or acceptance criteria – Develop performance criteria for new data being collected or acceptable criteria for existing data being considered for use.
7	Develop the plan for obtaining data – Select the resource-effective sampling and analysis plan that meets the performance criteria.

The approach adopted relative to the seven steps presented above is discussed in **Table 2** below.

Table 2 Data Quality Objectives

Step	Data Quality Objective Step Summary
1 - State the Problem	Historical use of aqueous film forming foam (AFFF) containing PFAS at the base has resulted in impacts to groundwater, surface water, sediment and biota on- and off-base. The data collected by implementing this SAQP will provide ongoing periodic / longitudinal dataset that can be used to assist with assessment of temporal changes in PFAS concentrations in groundwater and surface water, sediment and aquatic biota on- and/or off-site. In June 2025, the NHMRC revised the drinking water screening criteria for PFOS, PFOA, PFHxS and PFBS, which were up to an order of magnitude lower than the PFAS NEMP (HEPA, 2025) screening criteria for drinking water. Most notably, the revised screening criteria for PFOS (0.008 µg/L) was below the standard laboratory limit of reporting (0.02 µg/L). To delineate the approximate extent of PFAS in groundwater to concentrations below the drinking water guidelines revised by NHMRC in 2025, and to re-assess

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Step	Data Quality Objective Step Summary
	the potential risks to off-site users of groundwater and surface water, selected off-site samples will require analysis at a lower laboratory LOR. Additionally, the temporal monitoring of PFAS concentrations in selected biota aims to provide data necessary to support and/or update the ongoing advice relating to minimising exposure (e.g. consumption of seafood).
2 - Identify the Decision/ Goal of the Study	The goal of the study is to establish a systematic routine groundwater, surface water, sediment and biota sampling and analysis program to: - refine current understanding of the distribution of PFAS in groundwater and surface water/sediment associated with the base - monitor changes in PFAS concentrations in selected aquatic biota sentinel species to identify potential changes to the risk profile for consumers - monitor changes to PFAS distribution and variability due to management actions and seasonal variations. This will allow decisions to be made regarding the assessment of risks to human and ecological receptors into the future (for example, updating the conceptual site model), and whether the OMP needs to be amended to reflect these updates.
3 - Identify Information Inputs to the Decisions	The information and inputs needed to support the decisions include: - PFAS results from previous environmental investigations - Meteorological data including rainfall - Previous data collected during the implementation of the 2019 OMP - Data collected during PFAS remediation management activities - Groundwater, surface water, sediment and biota data collected and analysed for PFAS, as part of this OMP (Defence, 2023a) - Advances in laboratory analytical approaches and changes in regulatory requirements.
4 - Define the Boundaries of the Study	The spatial and temporal boundaries that apply for data collection are below: - The spatial boundary for data collection is the base and Management Area - The sampling completed as part of the OMP will be limited to groundwater, surface water, sediment and biota, at the frequencies defined in Section 4.2 - The monitoring will be ongoing.
5 - Develop the Analytical Approach	The analytical approach has been designed to collect environmental monitoring data of sufficient quality and quantify in order to identify potential changes in the known extent of PFAS in the environment, and any potential changes to the conceptual site model and associated risk profile. The decision rules for the study are as follows: - is the study approach scientifically suitable and defensible? <u>Decision Rule:</u> The study approach is considered scientifically suitable and defensible if data are collected in accordance with the applicable guidelines and legislation (outlined in Section 1.3), and the approach outlined in this SAQP. - are the collected datasets adequate to assess changes:

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Step	Data Quality Objective Step Summary
	a. in the known nature and extent of PFAS in groundwater, surface water, sediment and biota. b. to the current CSM. c. to the current risk profile for on and off-base human health and ecological receptors. <u>Decision Rule:</u> If the datasets described in Step 3 are collected, that is adequate. During implementation of the SAQP, if it is determined that a Decision Rule finding will not be adequate/ sufficient, AECOM will discuss amending the data collection procedure with Defence.
6 - Specify Performance or Acceptance Criteria	The QA/QC and data validation program is presented in Section 3.2 and Section 4.6.3. Should the performance or acceptance criteria not be met, AECOM will notify Defence and discuss the next steps to achieve the objectives.
7 - Develop the Plan for Optimising the Design for Obtaining Data	The methodology adopted for this investigation has been designed to meet the project objectives and achieve the nominated DQOs. Optimisation of the data collection process will be achieved by: - Assessment of data quality (Section 3.2) - Working closely with the analytical laboratories (and sampling equipment suppliers to ensure that sample handling, transport to and processing by the analytical laboratories is appropriate. - Conducting sampling according to set Standard Operating Procedures (SOPs) and Australian Standards² for the type of sampling being conducted (i.e. groundwater monitoring well sampling versus landholder bore water sampling). - Basing the sampling upon a CSM developed using the information available at the implementation of the OMP (Defence, 2023a). Updating the CSM as new data becomes available in the course of the implementation of the OMP (Defence, 2023a), as required. - Progressive review of the data and modification of sampling programs to optimise the value of data generated. If the objectives of the OMP (Defence, 2023a) are not being met, the sampling design and approach will be reviewed and amended, as required.

3.2 Assessment of Data Quality

The quality of data collected as part of the sampling will be assessed on a range of factors including:

- documentation and data completeness; and
- data quality – comparability, representativeness, precision and accuracy of the analytical data.

The project target for data completeness is to achieve 95% of data as suitable for use. The acceptance criteria for DQIs for samples are specified in **Table 3**.

² Standards Australia (AS/NZS5667.11–1998) Water Quality – Sampling, part 1: Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples

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Data Quality Indicators (Water and Sediment Samples)	Acceptance Criteria
Field Program	Sampling to be completed by suitably qualified and experienced field teams employing appropriate sampling procedures.
Rinsate Blanks	Rinsate blank samples are to be collected at a rate of one per day of sampling (where sampling equipment is reused). The rinsate blanks would be analysed for PFAS at low level laboratory LOR on days where primary samples collected are scheduled for the same analysis. Concentrations of PFAS should be less than the laboratory LOR.
Field duplicates	Field duplicates as intra-laboratory and inter-laboratory duplicates are to be collected and analysed at a rate of 10% (1 per 10 primary samples) for water matrices and at a rate of 20% (1 in 20 primary samples) for soil matrices. The relative percentage differences (RPD) will be assessed as acceptable if less than or equal to 30% as per the NEPM Schedule B3. Where the results show greater than 30% difference a review of the cause will be conducted (NEPM, 2013). It is noted that RPDs that exceed this range may be considered acceptable where: • results are less than 10 times the LOR (no limit) • results are between 10 and 20 times the LOR and the RPD is less than 50% • heterogeneous materials are encountered.
Laboratory duplicates	The RPD will be assessed as acceptable based on the magnitude of the result: • 0-20% for results more than 20 times the LOR • 0-50% for results between 10 and 20 times the LOR • No limit for results between 0 and 10 times the LOR
Matrix spikes	Recoveries between 70-130% of the theoretical recovery or as nominated in the laboratory's Quality Control report.
Method blanks	Less than the laboratory LOR.
Laboratory control samples	Recoveries between the laboratory-specified range for each particular analyte/analytical suite.

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4.0 Scope of Works and Methodology

The OMP (Defence, 2023a) presents an overview of specific monitoring works to be undertaken and provides the basis for the preparation of this SAQP. This scope of works presented in this SAQP is consistent with that detailed in the OMP (Defence, 2023a). Deviations from the OMP are presented in **Section 5.0**.

4.1 Proposed Schedule

The key element of the OMP (Defence, 2023a) is six monthly groundwater, surface water and sediment sampling on- and off-base, and biota sampling biennially (every two years). This includes:

- An autumn comprehensive sampling and analysis event for the first of the biannual groundwater, surface water and sediment sampling events timed to occur in March / April
- A spring targeted sampling and analysis event for the second of the biannual groundwater, surface water and sediment sampling events timed to occur in September / October to target key monitoring wells
- Biota sampling for sentinel species in Fullerton Cove to occur every second year.

The rationale for these elements is summarised below:

- The six-monthly monitoring to occur:
 - o **Autumn** (March / April), during high average rainfall period (128 mm for March and 109 mm for April) based on Bureau of Meteorology (BoM) Williamtown RAAF weather station (number 061078); and
 - o **Spring** (September / October), during low average rainfall period (60 mm for September and 76 mm for October) based on BoM.

It is considered that relatively higher contamination concentrations may occur in groundwater and surface water systems during the high average rainfall periods due to the effects of higher infiltration rates through the unsaturated zone which may mobilise contaminants.

- The monitoring event targeting low average rainfall period will increase the understanding of changes in PFAS concentrations in groundwater at discrete locations, considered to be of importance for understanding trends (for example bores close to source areas, base boundaries and creek systems), or locations with higher sensitivity (groundwater sample locations with concentrations close to screening criteria, areas with fewer monitoring locations).

In addition to the routine OMP sampling, a number of additional groundwater sampling locations have been selected for Ad Hoc sampling purposes during the October 2025 sampling event. These locations will subsequently be reviewed for potential inclusion in the OMP (refer to **Table 16**).

The schedule of fieldworks under the OMP (current and previous) is presented in **Table 4** below.

Table 4 Fieldwork Schedule

Sampling Round No.	Description of works	Proposed Schedule
1	Biannual groundwater, surface water, sediment and soil sampling	November 2019 (Completed)
2	Biota sampling	January 2020 (Completed)
3	Annual groundwater, surface water, sediment and soil sampling	May 2020 (Completed)
4	Flood water sampling	July 2020 (Completed)

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Sampling Round No.	Description of works	Proposed Schedule
5	Biannual groundwater, surface water, sediment and soil sampling, surface water max flux baseline sampling	November 2020 (Completed)
6	Surface water mass flux event	December 2020 (Completed)
7	Surface water mass flux event	January 2021 (Completed)
8	Biota sampling	February 2021 (Completed)
9	Annual groundwater, surface water, sediment and soil sampling	May 2021 (Completed)
10	Biannual groundwater, surface water, sediment and soil sampling	November 2021 (Completed)
11	Biota sampling	February 2022 (Completed)
12	Annual groundwater, surface water, sediment and soil sampling	May 2022 (Completed)
13	Biannual groundwater, surface water, sediment and soil sampling	November 2022 (Completed)
14	Annual groundwater, surface water, sediment and soil sampling	May 2023 (Completed)
15	Biannual groundwater, surface water and sediment sampling	November 2023 (Completed)
16	Biota sampling	January to April 2024 (Completed)
17	Annual groundwater, surface water and sediment sampling	April 2024 (Completed)
18	Biannual groundwater, surface water and sediment sampling	September 2024 (Completed)
19	Annual groundwater, surface water and sediment sampling. Additional Ad Hoc groundwater locations.	April 2025 (Completed)
20	Biannual groundwater, surface water, sediment and soil sampling. Additional Ad Hoc groundwater locations	October 2025
21	Biota sampling	February 2026
22	Annual groundwater, surface water, sediment and soil sampling	April 2026
23	Biannual groundwater, surface water and sediment sampling	October 2026
24	Annual groundwater, surface water, sediment and soil sampling	April 2027

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Sampling Round No.	Description of works	Proposed Schedule
25	Biannual groundwater, surface water and sediment sampling	October 2027

4.2 Sampling Locations**4.2.1 Groundwater Sample Location Rationale**

Groundwater monitoring will be undertaken on selected monitoring wells, Hunter Water bores and residential bores. The OMP (Defence, 2023a) will monitor water quality in the shallow and deep portions of the Tomago Sandbeds aquifer. The current understanding of the CSM is that PFAS concentrations in the intermediate groundwater (approximate depth of 12 m bgs) are similar to that of the deeper portions (approximate depth of 20 m bgs) of the aquifer, and hence will not be targeted.

The rationale for monitoring well selection for each area is summarised in **Table 5** below.

Table 5 Groundwater Sample Location Rationale

Area	Rationale
On-base	• Monitor spatial and temporal variations in PFAS concentrations in groundwater concentrations up, down and cross-gradient of source areas • Monitoring of PFAS concentrations in groundwater within and downgradient of the source areas to assess change in response to management measures over time • Monitoring of HWC assets that are in close proximity to the PFAS plume to inform risk to a potential drinking water supply • Monitoring of sentinel wells for Pump Station 7 located on-base • Monitoring of PFAS concentrations in groundwater within the on-base Moors Drain Catchment, targeting elevated PFAS concentrations detected during recent PFAS characterisation studies. • Continue to monitor groundwater wells with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations • Monitoring of groundwater on transects parallel and perpendicular to plume, and at shallow and deep portions of the aquifer to assist with understanding concentration changes in the nominated transect alignments.

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Area	Rationale
East of base	• Monitor spatial and temporal variation in PFAS concentration in groundwater up and down hydraulic gradient of HWC asset Pumping Station 9 • Continue to monitor groundwater wells with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations • Monitor potential changes in PFAS concentrations at the plume margins to refine model predictions and provide an indication of additional management of PFAS to groundwater users outside the current plume • Monitor groundwater adjacent to Moors Drain to assess PFAS migrating from the drain to groundwater • Monitor groundwater on transects parallel and perpendicular to the plume, and at shallow and deep portions of the aquifer to assist with understanding concentration changes in the nominated transect alignments.
West of base	• Monitor the western edge of the plume in relation to HWC asset Pumping Station 5 at sentinel locations • Monitor the movement of PFAS from the former Fire Training Area (FFTA) towards southern boundary (within the Demolition of Explosive Munitions Site (DEMS) Area) • Monitor groundwater wells on transects parallel and perpendicular to plume, and at shallow and deep portions of the aquifer to assist with understanding concentrations changes in the nominated transect alignments.
Southern Area	• Monitor potential changes in PFAS concentrations at the plume margins in the Southern Area (Primary Management Zone) to refine model predictions • Continue to monitor groundwater wells with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations • Monitor groundwater on transects parallel and perpendicular to plume, and at shallow and deep portions of the aquifer to assist with understanding concentrations changes in the nominated transect alignments.
Cabbage Tree Road	• Monitor potential changes in PFAS concentrations to refine model predictions and provide an indication of additional management of PFAS to groundwater users outside the current plume • Continue to monitor the isolated detections of PFAS in groundwater that have been considered to be associated with unconfirmed mechanisms. This may include transport of PFAS via surface water, flooding or an unidentified source • Continue to monitor wells with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations • Monitor groundwater on transects parallel and perpendicular to plume, and at shallow and deep portions of the aquifer to assist with understanding concentrations changes in the nominated transect alignments.

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Area	Rationale
Lavis Lane	• Monitor the plume to the south east of the base and in the Lavis Lane area • Monitor groundwater adjacent to Fourteen Foot Drain • Monitor potential changes in PFAS concentrations at the plume margins to refine model predictions and provide an indication of additional management of PFAS to groundwater users outside the current plume • Continue to monitor wells with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations • Monitor groundwater on transects parallel and perpendicular to plume, and at shallow and deep portions of the aquifer to assist with understanding concentrations changes in the nominated transect alignments.
Salt Ash	• Monitor the isolated detections of PFAS in groundwater in Salt Ash that have been considered to be associated with unconfirmed mechanisms. This may include transport of PFAS via surface water, flooding or an unidentified source • Monitor potential changes in PFAS concentrations at the plume margins to refine model predictions and provide an indication of additional management of PFAS to groundwater users outside the current plume • Continue to monitor wells with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations • Monitor groundwater on transects perpendicular to the plume, and at shallow and deep portions of the aquifer to assist with understanding concentrations changes in the nominated transect alignments.
Fullerton Cove	• Monitor the isolated detections of PFAS in groundwater that have been considered to be associated with unconfirmed mechanisms. This may include transport of PFAS via surface water, flooding or an unidentified source • Monitor potential changes in PFAS concentrations to refine model predictions • Continue to monitor wells with existing temporal datasets to assist with better understanding of temporal patterns in PFAS concentrations.

4.2.2 Groundwater Sampling Locations

The groundwater locations to be monitored on a biannual (six-monthly) and/or annual basis, as well as those to be sampled on an Ad Hoc basis (to be later reviewed) are provided in **Table 6** below and are presented on **Figures 1 to 4** in **Appendix A**.

Up to 75 groundwater locations will be analysed for PFAS at low level laboratory LOR as specified in **Table 6**. The analysis of selected groundwater samples at the lower level will allow comparison to the NHMRC (2025) PFAS drinking water values (also refer to Table 16).

DRAFT**Table 6 Groundwater Monitoring Locations**

On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
On-base	Former & Current Fire Station (Facility 165)	MW196	-	391067.540	6371029.000	6.760	0.8 - 3.8	Annual	Standard	7 A 0 B
		MW198	-	391345.470	6370725.360	6.110	0.8 - 3.8	Annual	Standard	
		MW200	-	390988.640	6370792.480	6.470	1 - 4	Annual	Standard	
		MW201D	MW201_D	391156.130	6370617.920	5.810	18.1 - 19.6	Annual	Standard	
		MW201S	MW201_S	391157.420	6370619.430	5.800	1 - 4	Annual	Standard	
		MW202D	MW202_D	391123.470	6370312.140	5.170	19.5 - 21	Annual	Standard	
		MW202S	MW202_S	391124.490	6370312.950	5.210	0.8 - 3.8	Annual	Standard	
	Former DEMS Landfill (Facility 394)	MW171D	MW171_D	390238.080	6370367.200	4.970	18.8 - 20.3	Annual	Standard	13 A 11 B
		MW171S	MW171_S	390238.630	6370369.860	5.020	0.7 - 3.7	Annual	Standard	
		MW172	-	390381.890	6370326.900	4.880	0.7 - 3.7	Biannual	Standard	
		MW240D	MW240_D	389953.970	6370418.760	5.742	18.5 - 20	Biannual	Low Level	
		MW281S	MW281_S	390096.831	6370391.813	5.290	1 - 4	Biannual	Standard	
		MW282S	MW282_S	390029.022	6370401.492	5.370	1 - 4	Biannual	Standard	
		MW329	-	390061.870	6370398.025	6.1215	2.4 – 5.39	Biannual	Standard	
		MW340D	MW340_D	389908.339	6370109.093	4.9554	17 - 20	Biannual	Standard	
		MW340S	MW340_S	389904.372	6370106.927	4.96194	2 - 5	Biannual	Low Level	
		MW342D	MW342_D	390047.305	6370082.577	4.76384	17 - 20	Biannual	Standard	
		MW344D	MW344_D	390174.365	6370020.042	4.52071	17 - 20	Biannual	Standard	
		MW344S	MW344_S	390170.968	6370020.705	4.77721	2 - 5	Biannual	Standard	
		MW354	-	390017.342	6370094.311	4.99285	2 - 5	Biannual	Standard	

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On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
On-base	Former Fire Training Area (Facility 479)	MW166	-	390180.440	6371071.560	7.100	0.8 - 3.8	Biannual	Standard	5 A 5 B
		MW167	-	390173.610	6370916.820	7.190	0.7 - 3.7	Biannual	Standard	
		MW168	-	390283.560	6370972.820	6.780	0.7 - 3.7	Biannual	Standard	
		MW169D	MW169_D	390286.310	6370678.240	5.800	18 - 19.5	Biannual	Standard	
		MW169S	MW169_S	390286.100	6370676.810	5.830	0.7 - 3.7	Biannual	Standard	
	HWC Pump Station 7 (PS7)	MW134D	MW134_D	390841.655	6371311.353	8.750	18.5 - 20	Annual	Low Level	6 A 0 B
		MW134I	MW134_I	390840.764	6371311.745	8.710	10 - 11.5	Annual	Low Level	
		MW245D	MW245_D	390873.232	6371892.027	9.311	18.5 - 20	Annual	Low Level	
		MW245S	MW245_S	390873.171	6371892.968	9.292	1 - 4	Annual	Standard	
		MW317D	MW317_D	391074.310	6371493.500	7.960	18.5 - 20	Annual	Low Level	
		MW317S	MW317_S	391074.570	6371495.370	7.970	1 - 4	Annual	Standard	
	Lake Cochran	MW108D	MW108_D	390150.053	6369806.549	3.080	18.5 - 20	Biannual	Low Level	8 A 6 B
		MW108S	MW108_S	390150.040	6369805.272	2.950	2 - 5	Biannual	Standard	
		MW109D	MW109_D	391022.625	6369664.782	3.157	18.5 - 20	Biannual	Standard	
		MW175D	MW175_D	390748.110	6369705.670	4.110	19.5 - 21	Biannual	Standard	
		MW179D	MW179_D	391061.230	6370026.550	4.760	18.5 - 20	Annual	Standard	
		MW179S	MW179_S	391062.530	6370026.330	4.710	0.8 - 3.8	Annual	Standard	
		MW466	W66	390771.594	6369702.376	4.320	unknown	Biannual	Standard	
		MW468	W68	390870.680	6369687.930	4.020	unknown	Biannual	Standard	
	North-East Landfill	MW406	W6	392381.420	6371741.140	8.270	unknown	Annual	Low Level	1 A 0 B

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On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
	Northern Boundary	MW155	MW155, MW155D	391628.530	6371705.370	7.960	1.5 - 3.8	Annual	Standard	1 A 0 B
On-base	Trade Waste Treatment (Facility 480)	MW106D	MW106_D	392480.672	6370432.290	4.770	18.5 - 20	Biannual	Standard	8 A 2 B
		MW106S	MW106_S	392479.396	6370433.468	4.678	3.5 - 5	Biannual	Standard	
		MW208	-	392206.680	6371122.880	6.990	1.2 - 4.2	Annual	Standard	
		MW210D	MW210_D	392148.550	6370846.040	7.350	18.5 - 20	Annual	Standard	
		MW210S	MW210_S	392149.680	6370843.300	7.220	2 - 5	Annual	Standard	
		MW304	BH531	392309.32	6371014.01	8.29	0.6 - 5.5	Annual	Standard	
		MW441	W41	392263.938	6371042.324	7.669	5 - 6	Annual	Standard	
		MW886	DFIG_MW02	392307.298	6371236.578	7.91	2 - 5	Annual	Standard	
Off-base	Cabbage Tree Road	MW125D	MW125_D	389753.894	6368475.203	2.173	18.5 - 20	Biannual	Low Level	11 A 9 B 1 AH
		MW125S	MW125_S	389754.887	6368474.495	2.197	6 - 7.5	Biannual	Low Level	
		MW126D	MW126_D	390861.585	6368364.380	1.794	18.5 - 20	Biannual	Low Level	
		MW126S	MW126_S	390859.700	6368364.000	1.790	5.5 - 7	Biannual	Standard	
		MW137	-	386813.080	6368756.200	2.820	0.5 - 3.5	Ad Hoc*	Low Level	
		MW139	-	-	-	1.986	1 - 4	Biannual	Low Level	
		MW178	-	389989.490	6368679.850	1.760	1.2 - 4.2	Biannual	Standard	
		MW230S	MW230_S	-	-	0.939	2.5 - 4	Biannual	Low Level	
		MW238D	MW238_D	-	-	2.211	18.5 - 20	Biannual	Low Level	
		MW238S	MW238_S	-	-	2.270	1 - 4	Biannual	Low Level	
		POT085	BWS085	-	-	n/a	n/a	Biannual*	Low Level	
		POT107	BWS107	-	-	n/a	n/a	Annual	Standard	

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On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
Off-base	East of Site - HWC Pump Station 9 (PS9) East of Site - HWC Pump Station 9 (PS9)	MW130D	MW130_D	393004.197	6371405.978	5.858	15 - 16.5	Biannual	Low Level	14 A 6 B
		MW130S	MW130_S	393002.625	6371406.828	5.794	1 - 4	Biannual	Low Level	
		MW132D	MW132_D	392897.695	6370765.961	6.138	15 - 16.5	Biannual	Standard	
		MW132I	MW132_I	392897.259	6370766.087	6.164	8.4 - 9.9	Biannual	Standard	
		MW159D	MW159_D	393918.000	6371319.400	5.260	18.5 - 20	Annual	Low Level	
		MW159S	MW159_S	393918.570	6371319.290	4.987	0.7 - 3.7	Annual	Low Level	
		MW160	-	393345.050	6370675.530	4.212	1 - 4	Biannual	Low Level	
		MW318D	MW318_D	393430.690	6370254.380	2.630	18.5 - 20	Annual	Standard	
		MW318S	MW318_S	393430.740	6370255.700	2.670	1 - 4	Annual	Low Level	
		MW829	PS9_BORE 30, MW652	393331.000	6370871.000	unknown	unknown	Biannual	Standard	
		MW842	SK3496_D	393087.000	6372057.000	unknown	unknown	Annual	Low Level	
		MW844	SK3496_S	393087.000	6372057.000	unknown	unknown	Annual	Low Level	
		MW897D	-	392732.38	6371335.8	7.34	17 - 20	Annual	Standard	
		MW897S	-	392731.69	6371333.83	7.44	3 - 6	Annual	Standard	
	East of Site – Moors Drain	MW121	-	393402.288	6369534.793	1.589	4.5 - 6	Annual	Standard	6 A 2 B
		MW161D	MW161_D	394144.090	6370281.980	2.057	18.8 - 23.3	Annual	Standard	
		MW161S	MW161_S	394144.490	6370280.230	2.052	1 - 4	Annual	Standard	
		MW247D	MW247_D	393434.921	6369931.136	2.529	18.5 - 20	Biannual	Standard	
		MW247S	MW247_S	393437.342	6369931.614	2.468	1 - 4	Biannual	Standard	
		POT046	BWS046	-	-	n/a	n/a	Annual	Standard	
	East of Site –	MW122	-	395353.806	6370014.338	1.851	5.5 - 7	Annual	Low Level	3 A

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On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
	Nelson Bay Road	MW162D	MW162_D	394497.850	6369568.440	2.876	18.6 - 20.1	Annual	Low Level	0 B
		MW162S	MW162_S	394497.180	6369567.050	2.838	1.5 - 4.5	Annual	Low Level	
Off-base	Fullerton Cove	MW142D	MW142_D	-	-	1.230	18.5 - 20	Ad Hoc*	Low Level	10 A 8 B 9 AH
		MW142S	MW142_S	-	-	1.230	0.8 - 3.8	Ad Hoc*	Low Level	
		MW144	-	-	-	1.923	1 - 4	Ad Hoc*	Low Level	
		MW147D	MW147_D	-	-	0.810	23.7 - 26.7	Annual	Low Level	
		MW147S	MW147_S	-	-	0.710	1 - 4	Annual	Standard	
		MW231D	MW231_D	-	-	0.571	16 - 17.5	Biannual	Low Level	
		MW231S	MW231_S	-	-	0.625	1 - 4	Biannual	Standard	
		MW232D	MW232_D	391685.900	6367694.410	1.324	18.5 - 20	Biannual	Low Level	
		MW232S	MW232_S	391686.550	6367693.690	1.148	1 - 4	Biannual	Low Level	
		MW270D	MW270_D	-	-	1.412	18.5 - 20	Biannual	Low Level	
		MW270S	MW270_S	-	-	1.411	2 - 4	Biannual	Low Level	
		MW266D	MW266_D	-	-	0.267	18.5 - 20	Ad Hoc*	Low Level	
		MW266S	MW266_S	-	-	0.229	1 - 4	Ad Hoc*	Low Level	
		POT236	BWS236	-	-	n/a	n/a	Biannual*	Standard	
		MW536	WELL1	-	-	1.864	unknown	Ad Hoc*	Low Level	
		MW537	WELL2	-	-	1.579	unknown	Ad Hoc*	Low Level	
		MW538	WELL3	-	-	1.295	unknown	Ad Hoc*	Low Level	

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On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
Off-base	Fullerton Cove	POT365	BWS365	-	-	n/a	n/a	Ad Hoc*	Low Level	
		POT382	-	-	-	n/a	n/a	Biannual	Low Level	
	Lavis Lane	MW128D	MW128_D	392595.830	6368186.070	0.843	9.3 - 10.3	Biannual	Low Level	6 A 3 B
		MW128S	MW128_S	392594.050	6368185.389	0.909	4.7 - 6.2	Biannual	Low Level	
		MW163	-	393228.090	6368715.090	1.207	0.5 - 3.5	Annual	Low Level	
		MW195	-	391861.030	6368367.600	1.050	0.8 - 3.8	Annual	Standard	
		MW279S	MW279_S	392270.061	6368420.027	1.295	0.8 - 3.8	Biannual	Standard	
		MW316D	MW316_D, MW319D	393238.400	6368714.460	1.200	18 - 20	Annual	Low Level	
	North of Site – Background	MW264D	MW264_D	391342.219	6372823.069	9.347	18.5 - 20	Biannual	Low Level	2 A 2 B
		MW264S	MW264_S	391341.189	6372822.252	9.492	1 - 4	Biannual	Low Level	
	Salt Ash	MW118	-	396874.979	6371821.789	1.674	4.5 - 6	Annual	Low Level	12 A 1 B 2 AH
		MW165	-	398783.05	6371455.23	1.408	2.5 - 5	Ad Hoc*	Low Level	
		MW123	-	396612.431	6371006.705	1.524	4.5 - 6	Annual	Standard	
		MW252S	MW252_S	396036.337	6371201.447	1.103	1 - 4	Biannual*	Low Level	
		MW255D	MW255_D	397301.190	6371001.280	1.260	18.5 - 20	Annual	Low Level	
		MW255S	MW255_S	397301.590	6371002.620	1.258	1 - 4	Annual	Low Level	
		MW256D	MW256_D	397345.350	6371814.030	1.534	18.5 - 20	Annual	Low Level	
		MW256S	MW256_S	397343.940	6371812.750	1.518	1 - 4	Annual	Low Level	
		MW257D	MW257_D	397433.640	6372046.790	1.819	18.5 - 20	Annual	Low Level	
		MW257S	MW257_S	397433.620	6372045.200	1.639	1 - 4	Annual	Low Level	

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On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
Off-base		MW260D	MW260_D	398217.180	6371740.430	2.080	18.5 - 20	Annual	Low Level	
		MW260S	MW260_S	398216.560	6371738.790	2.124	1 - 4	Annual	Standard	
		MW262S	MW262_S	399323.000	6372205.000	unknown	3 - 5	Ad Hoc*	Low Level	
		POT144	BWS144	-	-	n/a	n/a	Annual	Low Level	
	South of Site – Nelson Bay Road	MW150D	MW150_D	392214.992	6369348.446	2.143	18.5 - 20	Annual	Low Level	2 A 0 B
		MW150S	MW150_S	392215.800	6369349.000	2.111	0.6 - 3.6	Annual	Low Level	
	Southern Area	MW177	-	390192.11	6369286.28	6.458	2.6 - 5.6	Biannual*	Standard	7 A 5 B
		MW185S	MW185_S	390940.88	6369353.006	3	1 - 4	Biannual*	Standard	
		MW188S	MW188_S	391077.170	6368465.490	1.439	0.8 - 3.8	Annual	Standard	
		MW188D	MW188_D	391078.557	6368466.180	1.354	18.5 - 20	Annual	Standard	
		MW220S	MW220_S	391050.822	6369140.819	2	1 - 4	Biannual*	Standard	
		MW731D	MW731_D	390971.27	6368702.31	2.19	18.5 - 20	Biannual	Standard	
		MW731S	MW731_S	390970.69	6368699.83	2.05	2.5 – 5.5	Biannual	Standard	

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On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Top of Casing Elevation (m AHD)	Screen Interval (mbgl)	Sampling Frequency	PFAS Analysis LOR	Total
Off-base	Southern Area - Cabbage Tree Road	MW146AD	MW146D_A	390352.000	6368257.000	1.620	18.5 - 20	Biannual	Low Level	6 A 6 B
		MW146S	MW146_S	390352.180	6368257.630	1.802	0.8 - 3.8	Biannual	Low Level	
		MW271D	MW271_D	-	-	1.308	18.5 - 20	Biannual	Low Level	
		MW271S	MW271_S	-	-	1.316	1 - 4	Biannual	Low Level	
		MW278D	MW278_D	390668.714	6368270.854	1.289	18.5 - 20	Biannual	Low Level	
		MW278S	MW278_S	390670.046	6368271.548	1.253	1.5 - 3	Biannual	Low Level	
	West of Site	MW107D	MW107_D	389492.110	6369998.764	3.362	18.5 - 20	Biannual	Low Level	7 A 7 B
		MW107S	MW107_S	389491.340	6369998.554	3.322	2 - 5	Biannual	Low Level	
		MW241D	MW241_D	388917.523	6370209.919	5.449	18.5 - 20	Biannual	Low Level	
		MW241S	MW241_S	388917.717	6370210.859	5.559	1 - 4	Biannual	Low Level	
		MW280S	MW280S_L, MW280_S	389373.293	6370090.665	3.831	1 - 4	Biannual	Low Level	
		MW315D	MW315_D, MW320D	389591.670	6370649.350	6.160	18 - 20	Biannual	Low Level	
		MW315S	MW315_S, MW320S	389591.670	6370649.350	6.180	1 - 4	Biannual	Low Level	
Total Annual Groundwater Sampling Locations										135
Total Biannual Groundwater Sampling Locations										73
Total Ad Hoc Groundwater Sampling Locations (Q3 2025 Sampling Event)										12

Note: *Change in frequency for 2025 sampling events. Frequency to be reassessed in early 2026

A: Annual Sampling Locations, B: Biannual Sampling Locations, AH: Ad Hoc Sampling Locations

Historical Name, Eastings, Northings, Top of Casing Elevation and Screen Interval are sourced from the Defence Esdat database. Some coordinates are not displayed for privacy reasons.

DRAFT**4.2.3 Surface Water Sampling Locations**

The surface water monitoring locations have been selected to maintain consistency with the monitoring completed during the implementation of the 2019 OMP (AECOM, 2019), and address the requirements of the NSW Government and provide additional data to assess temporal variability. Four additional locations (SW333, SW582, SW588, SW600) were added within Dawsons Drain, Moors Drain and Fourteen Foot Drain.

The locations to be monitored on a biannual (six monthly) basis are provided in **Table 7** below and are presented on **Figures 1 to 4** in **Appendix A**. All surface water locations will be analysed for PFAS at the standard LOR.

Table 7 Surface Water Monitoring Locations

On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Total
On-base	Dawsons Drain (Lake Cochran)	SW055	DD1	390150.677	6369798.630	1
	Lake Cochran	SW108	LC	391123.700	6369909.000	2
		SW110	LC_B	390783.280	6369838.664	
	Moors Drain Catchment	SW582	-	392294.93	6371073.14	2
		SW588	-	392432.56	6370405.19	
	On-Site Drain (East of Former DEMS Landfill)	SW048	BD04	390594.587	6370302.505	1
On-Site Drain (North of Lake Cochran)	SW047	BD03	391110.917	6370186.229	1	
Off-base	Dawsons Drain	SW059	DD2	389781.611	6368463.966	3
		SW060	DD3	390896.510	6368398.705	
		SW333	-	-	-	
	Fourteen Foot Drain	SW062	DD5	391642.635	6367808.154	2
		SW600	-	-	-	
	Fullerton Cove Ring Drain	SW259	FCD4	-	-	1
	Moors Drain	SW001	MD1	392531.852	6370412.424	7
		SW005	MD5	398523.104	6372342.800	
		SW006	MD6	392391.918	6369501.696	
		SW007	MD7	392398.750	6369734.616	
		SW009	MD8	393389.182	6369933.826	
		SW011	MD10	395719.424	6370956.542	
		SW014	MD14	397430.793	6372140.735	
	Ten Foot Drain	SW081	TFD1	391369.231	6367128.789	1
	Tilligerry Creek	SW019	TC12	-	-	4
		SW023	TC6A	397274.000	6370916.000	
		SW024	TC7	398841.534	6371521.129	
		SW079	TC2	392602.731	6368195.612	
	Total					

Note: Historical Name, Eastings and Northings are sourced from the Defence Esdat database. Some coordinates are not displayed for privacy reasons.

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4.2.4 Sediment Sampling Locations

Sediment sampling will be undertaken at the locations where surface water samples are collected as defined in **Section 4.2.3**. The sediment sampling locations have been selected to maintain consistency with the monitoring completed during the implementation of the 2019 OMP (AECOM, 2019a) and address the requirements of the NSW Government and provide additional data to assess temporal variability. Two additional locations (SD333, SD600) were added within Dawsons Drain and Fourteen Foot Drain.

The locations to be monitored on a biannual (six-monthly) basis are provided in **Table 8** below and are presented on **Figures 1 to 4** in **Appendix A**. All sediment locations will be analysed for PFAS at the standard LOR.

Table 8 Sediment Sample Locations

On/Off-base	Area	Location ID	Historical Name	Easting	Northing	Total
On-base	Dawsons Drain (Lake Cochran)	SD055	DD1	390150.677	6369798.630	1
	Lake Cochran	SD108	LC	391123.700	6369909.000	2
		SD110	LC_B	390783.280	6369838.664	
	On-Site Drain (East of Former DEMS Landfill)	SD048	BD04	390594.587	6370302.505	1
	On-Site Drain (North of Lake Cochran)	SD047	BD03	391110.917	6370186.229	1
Off-base	Dawsons Drain	SD059	DD2	389781.611	6368463.966	3
		SD060	DD3	390896.510	6368398.705	
		SD333		-	-	
	Fourteen Foot Drain	SD062	DD5	391642.635	6367808.154	2
		SD600		-	-	
	Fullerton Cove (tidal gate outlet)	SD254	FC1A	-	-	3
		SD255	FC1B	-	-	
		SD326	FC1C	-	-	
	Fullerton Cove Ring Drain	SD259	FCD4	-	-	1
	Moors Drain	SD001	MD1	392531.852	6370412.424	7
		SD005	MD5	398523.104	6372342.800	
		SD006	MD6	392391.918	6369501.696	
		SD007	MD7	392398.750	6369734.616	
		SD009	MD8	393389.182	6369933.826	
		SD011	MD10	395719.424	6370956.542	
		SD014	MD14	397430.793	6372140.735	
	Ten Foot Drain	SD081	TFD1	391369.231	6367128.789	1
	Tilligerry Creek	SD019	TC12	-	-	4
		SD023	TC6A	397274.000	6370916.000	
		SD024	TC7	398841.534	6371521.129	
		SD079	TC2	392602.731	6368195.612	
Total						26

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Note: Historical Name, Eastings and Northings are sourced from the Defence Esdat database. Some coordinates are not displayed for privacy reasons.

4.2.5 Biota Sampling Locations

Sampling will continue to target sentinel species in Fullerton Cove (refer to **Figure 1** in **Appendix A**) as per the previous OMP (AECOM, 2019) that were identified to accumulate elevated concentrations of PFAS relative to other species, namely:

- Dusky Flathead (*Platycephalus fuscus*)
- Luderick (*Girella tricuspidata*)
- School Prawn (*Metapenaeus macleayi*).

A description of these species is provided in **Table 9** below.

Table 9 Aquatic Biota Description

Species	Description
Finfish	
Dusky Flathead (<i>Platycephalus fuscus</i>)	• Dusky Flathead PFAS levels in the Hunter River were considered to be elevated relative to other species, variable and did not follow spatial patterns evident in the other species • Dusky Flathead is a target recreational and commercial species.
Luderick (<i>Girella tricuspidata</i>)	• Found primarily in estuaries and around nearshore rocky reefs • Spawning occurs in surf zones near estuary entrances during winter, the larvae then enter estuaries and small juveniles live in sheltered shallow water habitats. Adults are mainly found in association with weedy habitats such as seagrass and rocky reefs. Adults migrate to near-coastal waters prior to spawning and may then return to estuaries • Mainly herbivorous, feeding on seagrass and green algae, and sometimes small invertebrates • Mature around 25 cm. Minimum legal length is 27 cm • Important recreational species, minor commercial species.
Crustacea	
School Prawn (<i>Metapenaeus macleayi</i>)	• Inhabit estuaries and inshore ocean waters • Spawn in near shore ocean waters between December and May. Post-larval prawns enter estuaries and move upstream. Following spring the adolescent prawns return down-stream and migrate to sea to mature and spawn • Prefer soft, muddy substrates and areas of seagrass • Eat a variety of small invertebrates and detritus • Maximum length 16 cm • Important domestic market.

It is noted that not all species above may be present at Fullerton Cove during the sampling event.

The aquatic biota monitoring locations are to be monitored on a biennial (every second year) basis. A summary of the sample numbers is provided in the **Table 10**. All biota samples will be analysed for PFAS at the standard LOR.

Table 10 Summary of sample numbers

Species	Number of Composite Samples per Event	Total No. of Individual Samples for each Composite
Dusky Flat Head	4	Up to 10
Luderick	4	Up to 10
School Prawn	4	Up to 10

DRAFT**4.3 Sample Collection and Handling****4.3.1 Sampling Methodology**

The sampling methodology is presented in **Table 11**.

Table 11 Groundwater Sampling Methodology and Schedule

Item	Details
Groundwater gauging	The depth to groundwater will be measured in each monitoring well prior to collection of groundwater samples. Additionally, during each sampling event a gauging round of selected groundwater locations will be conducted to enable groundwater contours to be developed. The selected locations for the targeted gauging event are as follows: • shallow wells: MW106S, MW122, MW123, MW124, MW125S, MW126S, MW146S, MW162S, MW188S, MW232S, MW247S, MW256S, MW257S, MW260S, MW268S and MW897S • deep monitoring wells: MW106D, MW125D, MW126D, MW146AD, MW162D, MW188D, MW232D, MW247D, MW256D, MW257D, MW260D, MW268D and MW897D.
Groundwater Sample Collection Methodology	Groundwater Monitoring Wells Groundwater samples will be collected from monitoring wells using no-purge methodology with HydraSleeves™ which will be installed within the screened interval of the wells. Care should be taken to avoid placing the base of the HydraSleeves™ at the base of the monitoring well, where a build-up of sediment may be present. The installation depth of the HydraSleeves™ is to be recorded (generally as HydraSleeve™ collar depth in metres below top of casing (mbTOC)). HydraSleeves™ are to be installed / deployed in monitoring wells for a minimum of 4 hours prior to sampling, when deployed with bottom weights only, and for a minimum of 24 hours prior to sampling, when deployed with both top and bottom weights, to allow re-stabilisation of the well following disturbance, and if applicable, for the top weight to compress. Following sampling, water quality parameters are recorded ex-situ, from any excess water available in the HydraSleeve™. In the event that a HydraSleeve™ fails to deploy or has been removed inadvertently (i.e. by a non-OMP project), the sample will be collected using a dedicated disposable high-density polyethylene (HDPE) bailer, if time or access constraints do not permit re-deployment of the HydraSleeve™ and subsequent sampling in the same sampling event. When sampling with a bailer, a minimum of three well volumes should be purged and purging should be continued until stabilisation of water quality parameters (to be collected continuously ex-situ) is achieved. If recharge is insufficient during purging, care will be taken to avoid purging the well dry and collecting the sample when reasonable to do so. Once sampling is completed, a new HydraSleeve™ will be deployed at the screened interval depth at each location in preparation for the next scheduled sampling round, where practicable. HydraSleeve™ sampling will be completed in accordance with the manufacturer's guidance. Due to narrow PVC of monitoring wells MW842 and MW844, groundwater samples will be collected using a peristaltic pump. MW829 is a non-traditional well with no well cap or gatic (pump station bore/sampling point) and will be sampled using a bailer.

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Groundwater Sample Collection Methodology	Residential Bores Bore water samples will be collected by placing the laboratory provided sample bottle beneath the tap outlet and the tap slowly opened to collect the “first flush” of water. Following sampling, water quality parameters will be recorded ex-situ, by placing the water quality meter (WQM) probe in a cup filled with bore water from the tap outlet.
Surface Water Sample Collection Methodology	Surface water samples will be collected in accordance with the ASC NEPM (NEPC, 2013) and PFAS NEMP (HEPA, 2025). Samples will be collected from either mid-way through the water column or approximately 0.5 m below the surface (if possible) using a ‘grab’ sample method, without disturbing the bottom of the surface water body and without capturing any surface film, to minimise collection of sediment, or floating materials in the samples. At each location, a new, laboratory supplied container should be lowered into the water with the cap immediately applied once the container is full. Where sampling points cannot be accessed safely, surface water samples will be collected with use of a sampling pole. Description of each sampling location will be recorded (including physical setting, flow observations, presence of sheen or foam etc).
Sediment Sample Collection Methodology	Sediment samples will be collected in accordance with the ASC NEPM (NEPC, 2013) and PFAS NEMP (HEPA, 2025). Sediment samples are to be collected from a depth representative of potentially deposited sediments and collected from within the water body, if possible. Where embankment stability and surface water depth permits, sediment samples will be collected using a hand trowel to a maximum depth of 0.3 m below the sediment surface. Where access to sediment is restricted by bank instability or the presence of surface water, samples will be collected using a hand auger or Dormer Piston Sediment Sampler. A new laboratory supplied container will be used at each location for collection of samples, and any reusable sampling equipment utilised will be de-contaminated between locations. Description of each sampling location and the sample material will be recorded.
Biota Sample Collection Methodology	Samples will be captured utilising the following process, similar to the previous methodology adopted during the 2019 OMP, and undertaken in accordance with the appropriate permits and ethics approval (refer to Appendix C). Four composite samples shall be collected per event, per target species. Each composite sample will comprise of up to 10 individual specimens and will be prepared at the laboratory under the laboratory’s supervision. In addition to the composite samples, one fillet from each fish will be retained and frozen for future analysis should information on individual variation (or linking of PFAS concentrations to biological attributes such as growth, sex etc.) be required at a later date. A detailed methodology for the collection of biota samples is presented in the Standard Operating Procedure for Aquatic Biota Sampling (Appendix C).
QA/QC Samples to be Collected	For water and sediment matrices, field QA/QC samples are to include intra-laboratory duplicate and inter-laboratory duplicate samples), as well as rinsate blank samples, as specified in Section 4.11. AECOM will collect extra sample volume to enable the laboratory to complete their internal QA/QC analysis.

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	AECOM personnel will attempt to reduce potential heterogeneity in the sample media matrix by dividing the sample collected between primary and intra-laboratory jars or bottles during sampling. For biota matrices, no duplicate sampling is proposed as the samples are being composited. Individual specimens of the composite samples will be retained to validate composite results as required.
Field Parameters	Temperature, electrical conductivity (EC), dissolved oxygen (DO), Redox (reduction-oxidation), pH and observations of water quality will be recorded for all groundwater and surface water samples, including: - physical indicators such as the presence (and approximate proportion) of suspended solids, colour - the presence/absence and nature of odours and the presence/absence of slicks or sheens on water.
Sample Analysis	Primary samples will be submitted for PFAS analytical full suite (30 analytes) using the standard levels of detection (i.e. standard LOR), with the exception of up to 75 groundwater monitoring locations, specified in Table 6, to be submitted for PFAS analytical full suite (30 analytes) using low level detection (i.e. low level laboratory LOR). For biota matrices, all composites will be prepared at the laboratory under the laboratory's supervision and will be tested for PFAS analytical full suite (30 analytes) using the standard levels of detection (i.e. standard LOR). Biota sample preparation by the laboratory includes removal of scales/shell, head and internal organs. Fillets will be taken with skin intact and homogenised prior to sub-sampling and analysis.

4.3.2 Decontamination of sampling equipment

To avoid cross-contamination between samples and sample locations, all reusable sampling equipment, such as interface probe and trowel, will be de-contaminated between locations. The proposed method of decontamination is summarised below:

- preliminary wash and scrub with tap water, after each sampling location
- wash using Liquinox®
- rinsed with tap water
- rinsed with deionised water (supplied by the laboratory).

Clean, disposable nitrile gloves will be worn and replaced between each sample.

4.3.3 Sample Handling and Transport to Laboratory

All samples will be placed on ice in eskies immediately after sampling. All water and moist sediment samples should be kept, where possible, at low temperatures ($\leq 6^{\circ}\text{C}$) during transit to the laboratory, in accordance with ASC NEPM (NEPC, 2013).

Samples will be transported directly to the laboratory for analytical testing under standard chain of custody (CoC) procedures. Primary and associated duplicate QA/QC samples will be analysed by Australian Laboratory Services (ALS). The inter-laboratory duplicate samples will be analysed by Envirolab Services (Envirolab). For biota matrices, samples will be analysed by the National Measurement Institute (NMI).

4.4 Calibration

The calibration of the water quality meter (WQM) will be tested each day via a "bump test" prior to the commencement of field activities with relevant solutions, including pH, EC and Redox. The calibration will be in accordance with manufacturers' instructions or National Association of Testing Authorities

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(NATA) publication “General Requirements for Registration: Supplementary Requirement: Chemical Testing (NATA 1993) and Technical Note N0. 19 (NATA 1994)”. Where satisfactory calibration cannot be achieved, the water quality data will not be used for interpretive purposes.

Calibration details will be recorded on field sheets and included in the Sampling Event Factual Reports for each sampling round.

4.5 Logistics

The laboratory sample containers will be shipped from the laboratory to the AECOM office in Sydney or Newcastle prior to the commencement of fieldwork. All samples will be transported by field staff or couriered directly to the relevant laboratory, at the completion of fieldwork. All inter-laboratory duplicate samples will be submitted under a separate CoC for analysis.

4.6 Analytical Suite and Laboratory Analysis Methods

4.6.1 Laboratory NATA Accreditation Details

The laboratory is required to use NATA accredited methods based on NEPM, US EPA, Table B 15 of the US Department of Defence/Department of Energy and American Society for Testing and Materials (ASTM) methods as appropriate.

The primary and secondary laboratories selected for this program are ALS (NATA Accreditation Number 825), NMI (NATA Accreditation Number 198), and Envirolab (NATA Accreditation Number 2901).

4.6.2 Analytical Schedule

All media sampled will be analysed for the 28-analyte PFAS suite (presented in **Appendix D**).

The current standard and low level laboratory LOR for the primary laboratories are described in **Table 12** below.

Table 12 Laboratory Limits of Reporting

Sample Media	Parameter	Technique/Method Reference	LOR
Water	PFAS Full Suite	LCMS	Low Level 0.002 – 0.01 µg/L
Water	PFAS Full Suite	LCMS	Standard 0.01 – 0.1 µg/L
Sediment	PFAS Full Suite	LCMS	Standard 0.0002 – 0.001 mg/kg
Biota	PFAS Full Suite	AUTLO7 (USEPA537/821)	Standard 0.0003 – 0.001 mg/kg

LCMS = Liquid chromatography mass spectrometry

4.6.3 Validation of Analytical Results

Validation of analytical results may be required in the form of re-analysis by the reporting laboratory or through re-sampling and analysis, to confirm original results.

The requirement for re-sampling and/or re-analysis will be determined in consultation with Defence and will generally apply to results that are first-time detections of PFAS in water matrices, new exceedances of human health guidelines or consecutive increases of PFAS concentrations in sediments.

4.7 Sample Nomenclature

In order to meet Defence data management requirements, a consistent sample nomenclature has been adopted for the Program. All primary samples will be labelled using the following naming convention:

PPPP_XX000_ZZZ_YYMMDD

[property ID]_[type of sample][THREE DIGIT sample number]_[top of sample depth]_[yearmonthday]

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e.g. 0908_MW001_240515

Location types and codes are prescribed by the Defence Contamination Management Manual, Annex L Data Management (Defence, June 2021) and the Site's investigation history.

Location types relevant to this SAQP include:

- MW = monitoring well
- SW = surface water
- SD = sediment
- BIOAFA = biota aquatic fauna (school prawn, dusky flathead, luderick).

QA/QC Samples will be labelled in accordance with the following convention:

- duplicate (intra-laboratory duplicate): PPPP_QC1XX_YYMMDD
- triplicate (inter-laboratory duplicate): PPPP_QC2XX_YYMMDD
- rinsate blank: PPPP_QC3XX_YYMMDD.

4.8 Defence ESdat Requirements

Defence has contracted Earth Science Information Systems (EScIS), to provide contamination data management services through a cloud instance of its Esdat product.

All field and laboratory data collected by AECOM will be uploaded, stored and managed in Defence's Environmental Data Management System (EDMS (Esdat)) in accordance with Section 6 of Annex L to the Defence Contamination Management Manual. AECOM will refer to historical investigation data to ensure consistent location codes are used to enable analysis of data trends. Where required under Annex L, non-compliant location codes will be resolved under direction from Defence.

AECOM will ensure that electronic data deliverables (EDDs) from the laboratory include required information for automatic upload into the EDMS, such as including the correct Project ID in Esdat files and including the Esdat auto-upload email address (DERP.LabReports@esdat.com.au - for the Defence database; esdat+audef@esdatlabsync.net – for Defence AECOM database) in the laboratory report recipient list.

4.9 Adopted Screening Criteria

Adopted screening criteria references national guidance in the form of the PFAS National Environmental Management Plan, Defence estate and environmental strategies, and Defence PFAS-specific strategies and guidance.

At the time of preparing this SAQP, a number of relevant guidance documents were in circulation in Australia including:

- PFAS National Environmental Management Plan (NEMP) Version 3.0, Heads of EPA (HEPA) Australia and New Zealand. March 2025 (HEPA, 2025)
- Department of Health (DoH), 2017. Health Based Guidance Values for PFAS for use in site investigations in Australia. April 2017 (FSANZ, 2017)
- National Health and Medical Research Council (NHMRC), 2019. Guidance on PFAS in Recreational Water. August 2019 (NHMRC, 2019)
- NHMRC, 2025. *Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy*.

The screening criteria adopted to assess the data generated as part of this SAQP are presented in **Table 13** and **Table 14** below, for human and ecological receptors, respectively. Note that the HEPA NEMP 3.0 (2025) does not provide screening criteria for PFAS in sediments.

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Media	Pathway	Compound	Criteria	Comment/Reference
Water – Groundwater	Drinking water	PFOS	0.008 µg/L	In June 2025, the NHMRC (2025) published revised drinking water criteria guidelines for PFOS, PFHxS, PFOA and PFBS. <i>All groundwater results will be compared to these criteria.</i>
		PFHxS	0.03 µg/L	
		PFOA	0.2 µg/L	
		PFBS	1 µg/L	
Water – Surface Water and Groundwater	Recreational use	PFOS + PFHxS	2 µg/L	The values presented in the PFAS NEMP (HEPA, 2025) are based on the NHMRC (2019) values. Note: given that groundwater at the base is extracted for irrigation purposes (post treatment), the recreational guidelines have been adopted to be protective of this water use activity. Note: groundwater at the base will also be screened against the drinking water guidelines as specified above. <i>All surface water and groundwater results will be compared to these criteria.</i>

Table 14 PFAS Adopted Screening Criteria - Ecological Receptors

Media	Pathway	Compound	Criteria	Comment/Reference
Water – Groundwater and Surface Water	Freshwater	PFOS	0.00023 µg/L	The values are from the PFAS NEMP (HEPA, 2025) which endorsed the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2023) . The 99% species protection level has been applied for high value conservation systems. This approach is generally adopted for chemicals that bioaccumulate and biomagnify in wildlife. It is proposed that the laboratory LOR is adopted for the purposes of preliminary screening of analytical water results, rather than sole use of the criteria value. <i>All surface water and groundwater results will be compared to these criteria.</i>
		PFOA	19 µg/L	

The adopted screening criteria for aquatic biota sampling are sourced from the Food Standards Australia New Zealand (FSANZ) *Perfluorinated chemicals in food* (FSANZ, 2017) and are summarised in **Table 15** below.

Table 15 PFAS Screening Criteria - Aquatic Biota

Compound	Criteria	Comment
FSANZ 2017 2-6 years Crustaceans (all species)		
PFOS	0.065 mg/kg	All school prawn sample results will be compared against these criteria
PFHxS	0.065 mg/kg	
PFOA	0.520 mg/kg	
FSANZ 2017 2-6 years Finfish (all species)		
PFOS	0.0052 mg/kg	

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Compound	Criteria	Comment
FSANZ 2017 2-6 years Crustaceans (all species)		
PFHxS	0.0052 mg/kg	<i>All luderick and dusky flathead sample results will be compared against these criteria</i>
PFOA	0.0410 mg/kg	

4.10 Waste Management

Due to the proposed “no purge” sampling methodology adopted for the majority of the groundwater monitoring locations and the grab samples from the designated surface water sampling locations, it is not anticipated that significant volumes of liquid waste would be generated that would require on-Site management and disposal.

All consumables (i.e. HydraSleeves™, general rubbish) will be bagged and placed in on-Site general waste bins for disposal.

4.11 Field Quality Assurance/Quality Control Sampling**4.11.1 Intra-laboratory and Inter-laboratory Duplicate Samples**

Intra-laboratory duplicate samples (blind duplicates) and inter-laboratory duplicate samples (blind triplicates) will be collected and analysed at a minimum frequency of 1 in 10 primary samples for water matrices and at a minimum frequency of 1 in 20 for soil matrices, in accordance with the QA/QC guidance outlined in HEPA (2025).

4.11.2 Rinsate Samples

Rinsate blank samples will be collected and analysed at a minimum frequency of 1 per day of fieldworks, in accordance with guidance outlined in the HEPA (2025).

Rinsate blanks will be collected by pouring laboratory supplied deionised water over decontaminated gauging and sampling equipment that will be re-used (e.g. interface probe, trowel).

4.12 Fieldwork Documentation**4.12.1 Field Notes**

Field notes will be maintained to record all field sampling events and include observations made at each sample location. Field notes will include general site setting, location information, and information specific to the sample media, as follows:

- weather conditions, and visual or olfactory conditions at the location
- location coordinates and means of access, and any changes from previous access to a specific location
- groundwater samples – the observed characteristics of the sample (e.g. colour, turbidity, presence/absence and nature of odours, presence/absence of slicks or sheens) and measured field water quality parameters (pH, EC, DO, ORP, temperature) will be recorded. Condition of monitoring wells and gauging details will also be recorded
- surface water samples – the observed characteristics of the sample (e.g. colour, turbidity, presence/absence and nature of odours, presence/absence of slicks or sheens) and field water quality parameters (pH, EC, DO, ORP, temperature) will be recorded. Additionally, a description of each surface water sampling location will be recorded, such as indicating the waterbody type (lake, stream, etc.), presence/absence of water flow, and waterbody width
- sediment samples – the observed characteristics of the sample (e.g. colour, sediment type, moisture, presence/absence and odours) and the depth will be recorded
- the quality control (e.g. intra-laboratory duplicate and inter-laboratory duplicate) sample details be recorded.

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The ESdat Field Portal will be utilised by field staff to capture consistent field data based on project specific requirements, minimise potential data transcription errors and facilitate efficient data review.

4.12.2 Sample Labels

Sample containers will be labelled, as a minimum, with the following information:

- AECOM project number
- name of sampler
- sample ID
- date of sample collection.

An indelible felt pen will be used for labelling, to ensure that the lettering is not erased during transit to the laboratory. Sample containers that are sent to the primary laboratory, ALS, will also be scanned into the laboratory's custom-built mobile app (by scanning the barcode applied to each laboratory-supplied container) for streamlined labelling and Chain of Custody (CoC) creation and to ensure compliant sample IDs are used in the field.

4.12.3 Chain of Custody Forms

A CoC form will be completed, documenting the sample identification number and analytes. The CoC documents the chain of events from sample collection to delivery at the laboratory and provides a traceable account of sample handling. The CoC form will be signed by both the sample collector and the receiving laboratory.

The CoC form will include the following information:

- job number
- date and time of sample collection
- sample ID
- type of containers
- name of sampler
- laboratory to be used
- analyses required
- any comments
- signatures of the sampler and laboratory receiver.

In the event that additional samples are collected during the field investigations due to observations made by the Field Team, (i.e. samples not proposed in this SAQP), Defence will be provided the rationale for collection of those samples and proposed laboratory analyses. Defence approval will be sought to include these samples on the CoC and to dispatch these samples to the laboratory.

Upon receipt of the original documents accompanying the samples at the laboratory, the laboratory will provide a sample receipt document (noting the temperature of samples upon receipt, analyses required and any non-conformances) and return the signed CoC form and sample receipt notification (SRN) to confirm analyses to be performed and the due date for the analytical results.

4.13 Reporting

4.13.1 Sampling Event Factual Report

AECOM will prepare and submit a Sampling Event Factual Report to Defence following the completion of each sampling event. The Sampling Event Factual Report will include:

- details of the scope completed
- a description of the sampling methodologies used

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- identification of any components of the scope that could not be completed
- a summary of field observations (e.g. any visual or olfactory observations that may indicate impacts to surface water or groundwater) and water quality parameter measurements
- evaluation of the applicability of adopted assessment levels
- a presentation of the analysis results in a table that includes comparisons with PFAS guidelines
- a presentation of groundwater levels for the event on a figure with inferred contours and inferred groundwater flow direction
- review of the suitability of the data for assessment purposes (QA/QC evaluation)
- inclusion of the following information as attachments:
 - field data including field water quality parameter and gauging measurements
 - chain of custody forms
 - laboratory analytical certificates
 - equipment calibration certificates.

The Sampling Event Factual Report will be provided to Defence no later than four weeks after completion of the field component. AECOM will inform Defence in the case of delays in laboratory results.

4.13.2 Ongoing Monitoring Report

At the end of each 12-month monitoring period, AECOM will prepare and submit an Ongoing Monitoring Report (OMR) to Defence. The OMR will include:

- evidence of compliance with the requirements of the SAQP and meeting stated objectives of the OMP (Defence, 2023a)
- identification of any components of the scope that could not be completed
- a summary of any changes to the monitoring network condition that may affect data integrity, or require rectification works, and recommendations for repair, replacement or decommissioning of a location
- relevant figures depicting sampling locations and site-specific hydrogeological features
- laboratory results and analysis including comparison with relevant screening criteria
- assessment and commentary on appropriate QA/QC procedures
- data interpretation, including trends in groundwater concentration, gradient and flow directions
- assessment of statistically based trends (as described in Step 3 and 5 of the DQOs) that may inform decision making when it comes to the revision of the OMP (Defence, 2023a) including whether a review of the Conceptual Site Model is required or whether the risk profile has changed overall, or for any specific location at the base, and a recommendation as to whether this should trigger an OMP and/or PMAP review, or other action.
- inclusion of the following information as attachments:
 - field data including field water quality parameter and gauging measurements
 - CoC forms
 - laboratory analytical certificates
 - equipment calibration certificates.

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5.0 Deviations from OMP

While the scope of works and methodology described in this SAQP are consistent with that presented in the OMP (AECOM, 2023a), a point of deviation is noted (refer to **Table 16** below).

Table 16 Deviations from OMP

No.	Description	Rationale
1	Addition of private property sampling locations MW139, POT046, POT085, POT107, POT144 and POT236	Following the removal of the sampling locations from the OMP (2019a), private property owners requested for the locations to continue to be sampled as part of the OMP (2023a).
2	Change of the PFAS standard analytical suite LOR for up to 70 off-base groundwater sampling locations as specified in Table 6	Sampling locations, where historical PFOS concentrations were consistently reported below or close to LOR, were selected to be analysed for PFAS at low level laboratory LOR, to allow for assessment against the draft Australian Drinking Water Guidelines. Of the current OMP groundwater sampling location, 56 were selected for low level LOR analysis. An additional four groundwater sampling location have also been selected for low level LOR analysis, to be sampled on Ad Hoc basis (see deviation #3 below). The change in level of detection will be applicable to the April 2025 event and will be reviewed for potential inclusion in the following event in October 2025.
3	Addition of groundwater sampling locations to be sampled on Ad Hoc basis as specified in Table 6	Four groundwater sampling locations (MW137, MW165, MW266D and MW266S) have been selected from within the BMZ boundaries for low level LOR analysis in addition to the existing OMP locations (as discussed above). An additional 10 groundwater sampling locations (MW142D, MW142S, MW144, MW262D, MW262S, MW536, MW537, MW538, POT303, POT365) have been selected as contingency locations for low level LOR analysis, based on the PFAS results from nearby locations.
4	Drinking water criteria	The OMP (Defence, 2023a) specifies that results from groundwater locations be screened against the human health screening criteria for drinking water of 0.07 µg/L for PFOS+PFHxS and 0.56 µg/L for PFOA. In June 2025, the NHMRC (2025) published revised drinking water criteria guidelines for PFOS (0.008 µg/L), PFHxS (0.03 µg/L), PFOA (0.2 µg/L) and PFBS (1 µg/L). Therefore, groundwater results will be screened against these new drinking water screening criteria.
5	Replacement of monitoring wells MW104D, MW104S, MW184D and MW184S	During the April 2025 sampling event, monitoring wells MW104D, MW104S, MW184D and MW184S could not be located and are assumed to have been destroyed by redevelopment works in this area. To address the gap in monitoring coverage, AECOM has included existing wells MW185, MW177 and MW220S to replace the wells above.

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No.	Description	Rationale
6	Addition of 16 additional groundwater sampling locations for Q3 monitoring event	Following the completion of the April 2025 monitoring event, AECOM recommended that the following monitoring wells be re-sampled during the next scheduled monitoring event to confirm the PFAS concentrations that were reported (the wells include: MW142D, MW142S, MW144, MW165, MW238D, MW238S, MW252S, MW262S, MW266S, MW266D, MW536, MW537, MW538 and POT085, POT236 and POT365)
7	Change of the PFAS standard analytical suite LOR for up to eight groundwater sampling locations	Following the completion of the April 2025 event, AECOM recommended the revision of the level of detection applied in the analysis of samples (from standard to low level) for eight groundwater monitoring locations where the concentrations of PFOS were below the standard level of detection during that event (MW108D, MW134D, MW134I, MW240D, MW245D, MW317D, MW340S, MW406). Lowering the detection limit would enable the review of data against the revised drinking water guidelines.
8	Replacement of monitoring well MW132S with MW132I	Following an audit of data collected under the OMP, it was identified that samples collected from well MW132S had been inadvertently collected from monitoring well MW132I. Monitoring well MW132S appears to have been destroyed or lost. AECOM has updated the SAQP to correctly identify the well as MW132I.

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Appendix A

Figures

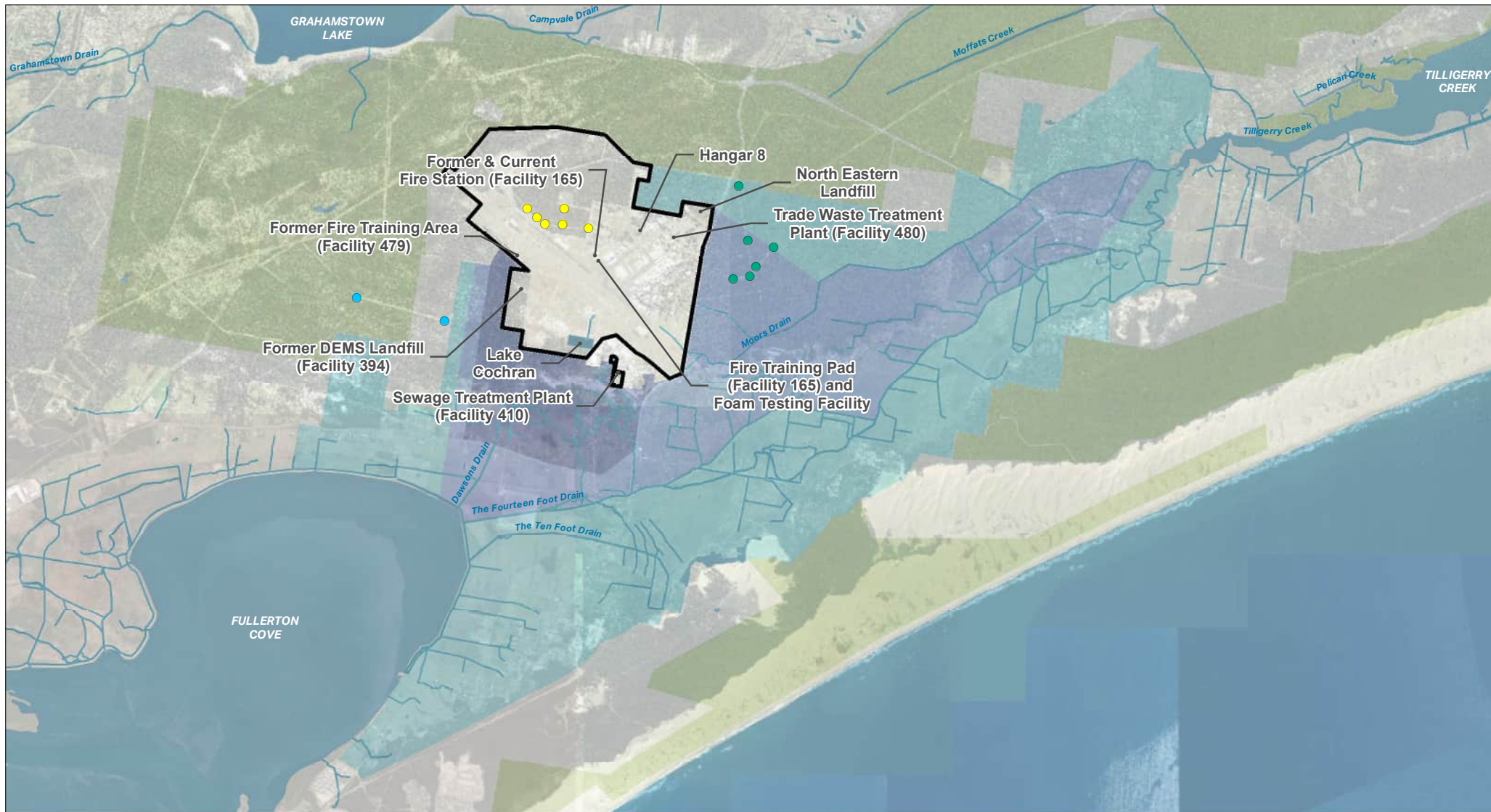


FIGURE F1: SITE LOCATION AND MANAGEMENT AREA

Legend

- RAAF Base Williamtown
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- National Parks and Reserves
- Pumping Stations 5
- Pumping Stations 7
- Pumping Stations 9
- Watercourse



0 1 2 km

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PROJECT
PFAS OMP - 60612562
RAAF BASE WILLIAMTOWN
SAMPLING AND ANALYSIS QUALITY PLAN

CLIENT
DEPARTMENT OF DEFENCE

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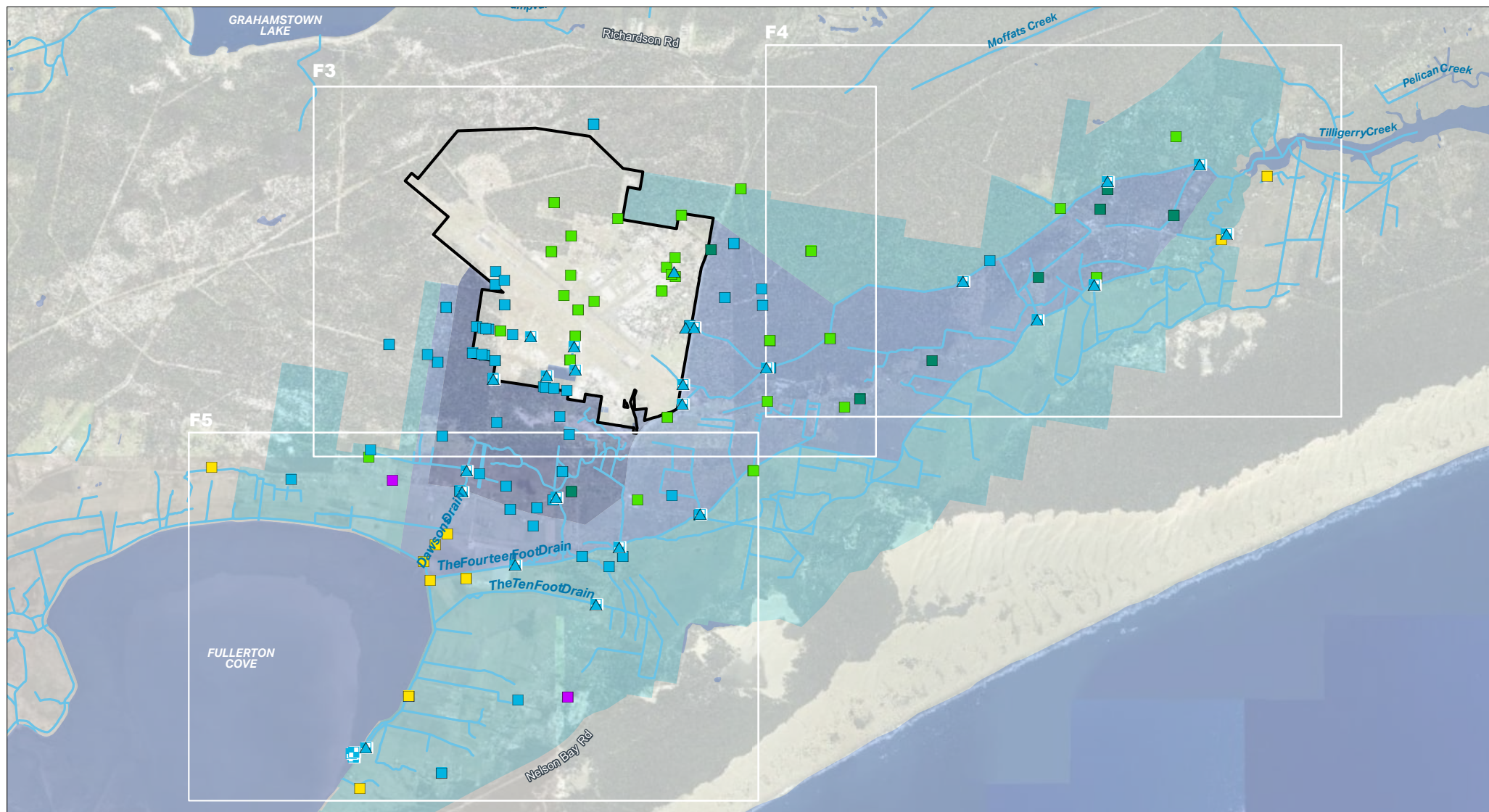


FIGURE F2: MONITORING OVERVIEW

Legend

□ RAAF Base Williamtown

— Watercourse

■ Primary Management Zone

■ Secondary Management Zone

■ Broader Management Zone

■ Sediment

□ Groundwater

△ Surface Water

■ Annual Sampling

■ Biannual Sampling

■ Gauge Only

■ Ad Hoc Sampling

■ Groundwater, Annual Sampling and Biannual Gauging



0 0.5 1 km

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RAAF BASE WILLIAMTOWN
SAMPLING AND ANALYSIS QUALITY PLAN

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Broader Management Zone

- Groundwater, Annual Sampling and Biannual Gauging

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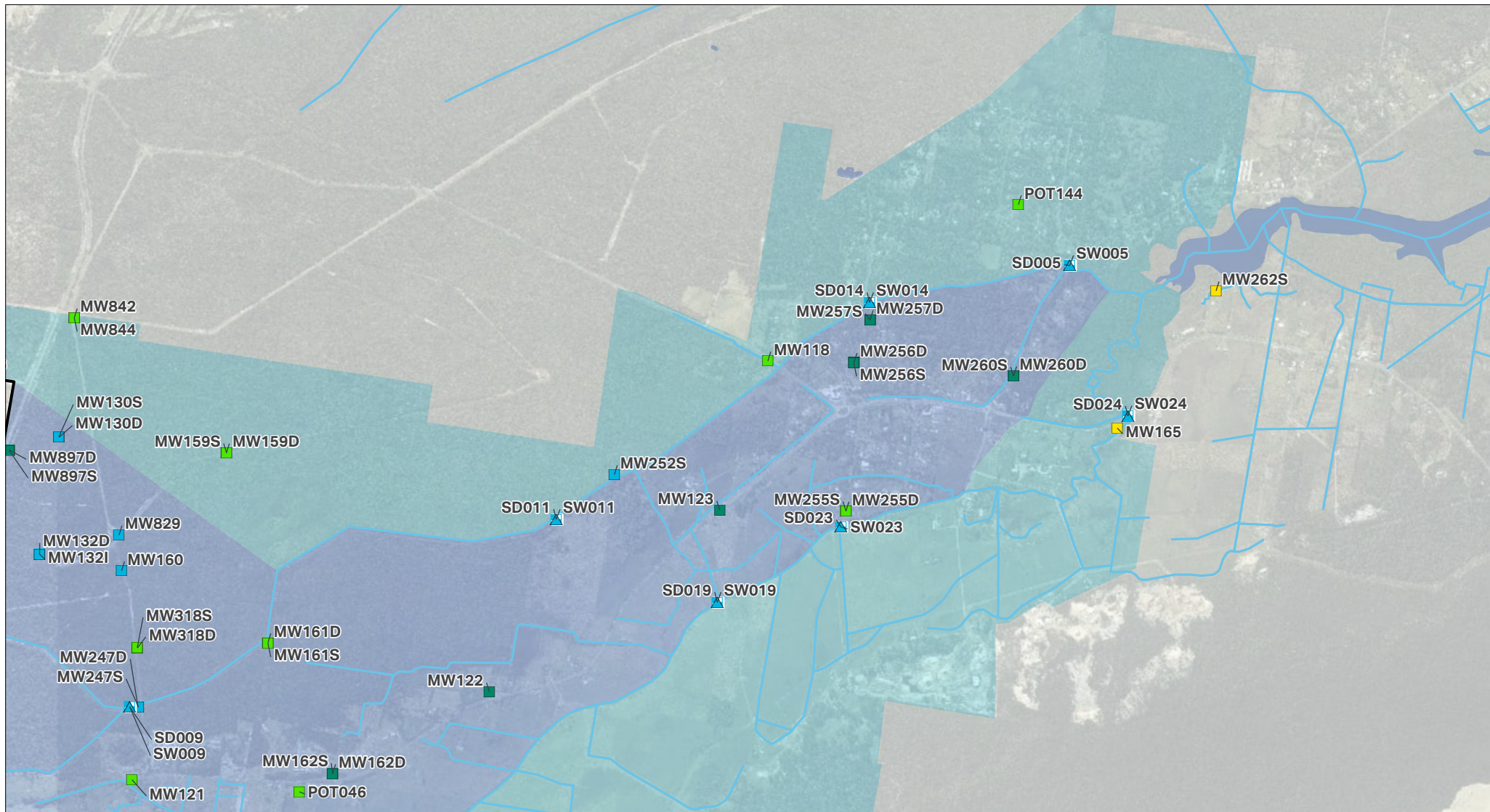


FIGURE F4: GROUNDWATER MONITORING LOCATIONS - EAST

Legend

□ RAAF Base Williamtown

— Watercourse

■ Primary Management Zone

■ Secondary Management Zone

■ Broader Management Zone

■ Sediment

□ Groundwater

△ Surface Water

■ Annual Sampling

■ Biannual Sampling

■ Gauge Only

■ Ad Hoc Sampling

■ Groundwater, Annual Sampling and Biannual Gauging



0 0.5 1 km

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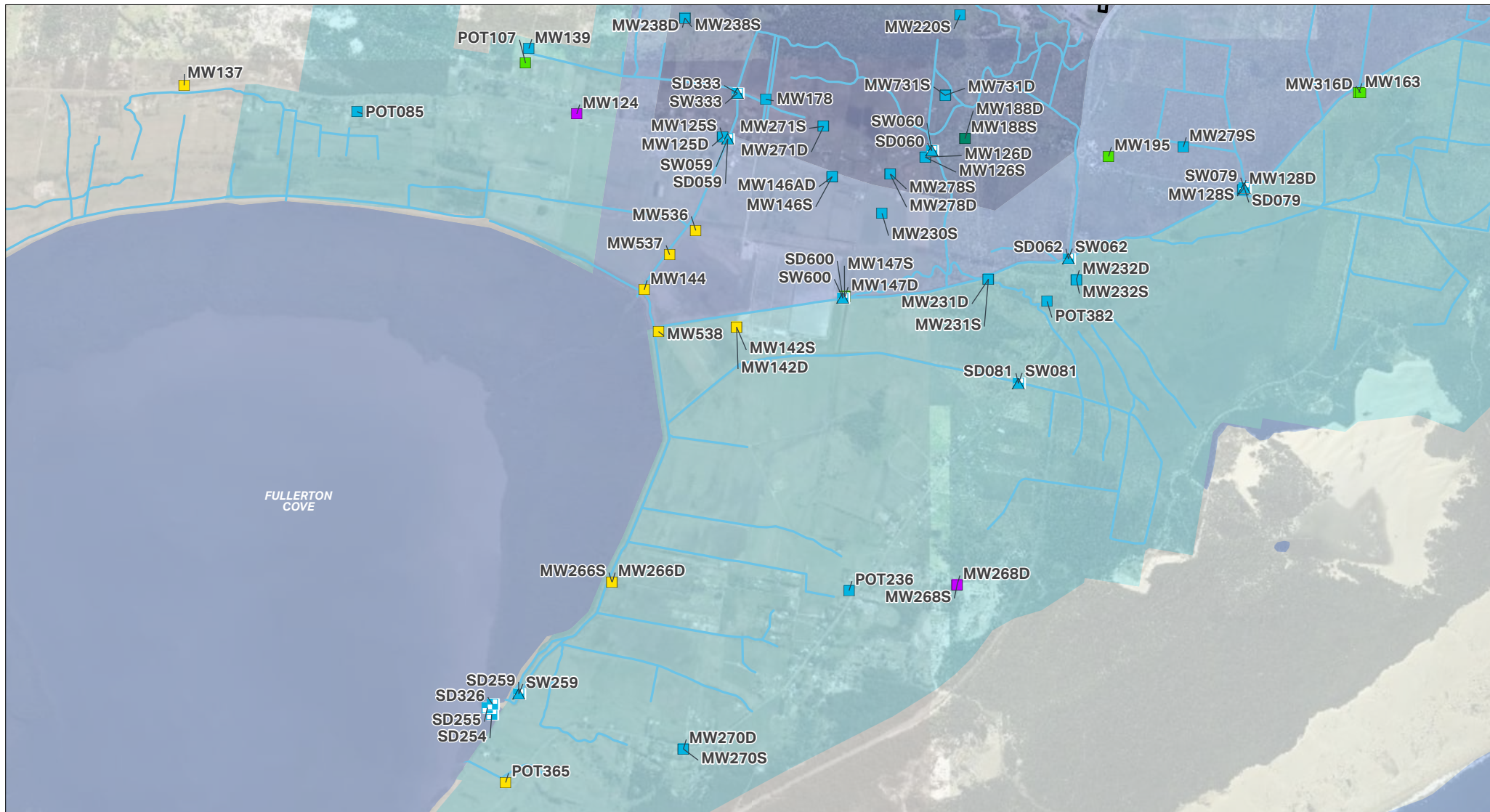


FIGURE F5: GROUNDWATER MONITORING LOCATIONS - SOUTH

Legend

□ RAAF Base Williamtown

— Watercourse

■ Primary Management Zone

■ Secondary Management Zone

■ Broader Management Zone

■ Sediment

□ Groundwater

△ Surface Water

■ Annual Sampling

■ Biannual Sampling

■ Gauge Only

■ Ad Hoc Sampling

■ Groundwater, Annual Sampling and Biannual Gauging



0 0.5 1 km

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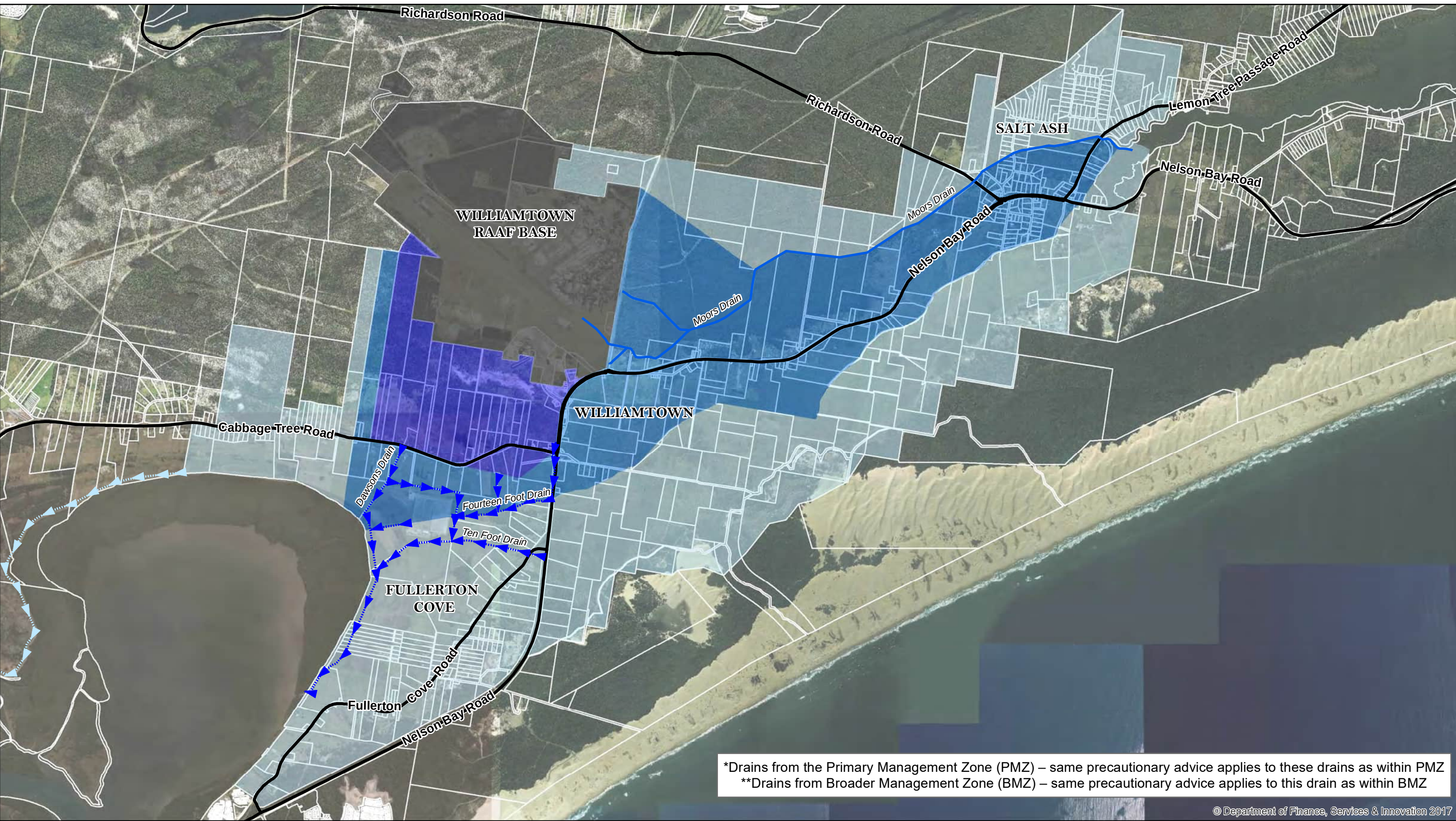
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Appendix B

Williamtown Management Area



*Drains from the Primary Management Zone (PMZ) – same precautionary advice applies to these drains as within PMZ
**Drains from Broader Management Zone (BMZ) – same precautionary advice applies to this drain as within BMZ

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	Primary Management Zone		Roads
	Secondary Management Zone		Moors Drain
	Broader Management Zone		Drains from Primary Management Zone*
	Williamtown RAAF Base		Drains from Broader Management Zone**
	Property Boundary		

Williamtown Management Area

Map Created: 19/12/2017

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information in the map and any consequences of such acts or omissions.

Base imagery: Nearmap 17 November 2017

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01,0002,000

Metres

Coordinate System: GDA 1994 MGA Zone 56



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Appendix C

SOP for Aquatic Biota Sampling

APPENDIX C:

Standard Operating Procedure for Aquatic Biota Sampling

1.0 Introduction

This procedure describes the methods for collecting representative aquatic biota samples from Fullerton Cove. If followed properly, use of this procedure will promote consistency in sampling collection and ensure regulatory compliance across Australia where best practice guidelines have been developed.

It is assumed that an appropriately experienced sub-contractor will be engaged to undertake the sampling. The subcontractor should hold the appropriate sampling permits and ethics approvals for the specific activity that is being undertaken. The sub-contractor engaged will supply all the necessary equipment to catch and store the samples on the vessel.

It is anticipated that an Environmental Scientist will be present at all times during the sampling stage of the works. However, in instances where this may not be possible due to the restrictions of the vessel, the sub-contractor will be fully briefed by the Environmental Consultant as to the procedure required.

2.0 Health and Safety

Health and Safety Plan (HASP) and task specific Safe Work Method Statements (SWMS) will be prepared prior to field works. The SWMS or Job Safety Analysis (JSA) will also be prepared by the sub-contractor for their specific tasks.

Prior to commencement of the works the project team will review the SWMS/JSA and discuss the potential hazards and mitigation measures.

Once the project team arrive at the sampling location, the hazards must be identified and adequate precautions must be taken to ensure the safety of the sampling team.

All sampling personnel must wear personal flotation devices (life vests). In addition it is assumed that the majority of the sampling will be from a boat, where appropriate protective measures must be identified and implemented in accordance with reviewed and approved HASP and SWMS/JSA. In addition, the use of electronic position indicating radio beacons (EPIRBs) will be considered.

3.0 Equipment

Equipment needed for collection of aquatic biota samples, may include:

- Stainless steel buckets.
- Two stainless steel identification board.
- Stainless steel ruler.
- Laboratory supplied polypropylene containers.
- GPS.
- Camera.
- Clipboard.
- Analytical-quality de-ionised water (15 L).
- Notebook / Felt-tipped markers / Waterproof labels.
- Digital scales.
- Cool box and ice.

- Figures of the sampling sites.
- Life vests.

4.0 Procedure

The following steps will be performed:

Monitoring

The following monitoring will be undertaken:

- Target sentinel species, namely School Prawn, Luderick and Dusky Flathead.
- Collection 4 composites of up to 10 individuals be prepared for each species.
- Monitor in Fullerton Cove.
- Monitor between December to March, every second year.

Planning, Mobilisation and Setup

- Prior to mobilisation, the sampling team will review the SAQP and this SOP to ensure they are familiar with the sampling plan, the sampling methods to be employed, and the types and amounts of equipment and supplies needed. This will be conducted by a project kick-off meeting.
- A kick-off meeting will also be conducted with the sub-contractor to ensure that the appropriate documentation in terms of permits are in place.
- The laboratory will be contacted at a minimum of one week prior to the intended sampling date to confirm the mass of tissue required and to ensure that the laboratory has the appropriate personnel available for preparation.
- Field staff will arrange field sampling equipment, as required.
- Weather forecast will be checked in the lead up to the sampling event. In the event that the forecast indicates stormy conditions, the sampling will be postponed until the weather clears.

On Arrival to Site/ Daily

- The conditions on arrival at site will be evaluated and discussed during the Toolbox talk. The sampling team will review the HASP and any modifications to the HASP and SWMS/JSA will be documented.
- Date, time of arrival on site, and site conditions (including weather) will be recorded.
- General locations for sampling will be marked or identified on a site map with a geo-reference to landmarks/topography. GPS coordinates will be recorded for each location. As required, the proposed locations may be adjusted based on site conditions and access.
- Photographs of the sampling locations and surrounding conditions will be taken.

Sampling

- Prior to sampling all dissection equipment will be decontaminated using laboratory supplied deionized water and three separate rinse stages. Sampling and monitoring equipment will also be decontaminated between sampling events at the same location, and following completion of the sampling event.
- Buckets will be prepared for sample holding and cleaning. One bucket (Bucket 1) will be filled with the local water and labelled and a second (Bucket 2) and third bucket (Bucket 3) with DI water. Scrubbing brushes will be used to clean the sample, where required. All scrubbing brushes will be kept in their appropriate buckets – labelling buckets and scrubbing brushes will ensure they are not mixed.
- Samples will be captured utilising the following process, similar to the previous methodologies used during the DSI, and undertaken in accordance with the appropriate permits and ethics approval:
 - Boats will be used to deploy mesh netting. Nets will be placed over night in the target locations and will be collected the following morning. Observations on the number of target species captured, bycatch and water quality will be recorded. Bycatch will be returned to the water, where possible.

- A prawn trawler will be used to trawl a net throughout the target area. At the end of each sampling run the net will be inspected. Observations on the number of target species captured, bycatch and water quality will be recorded. Bycatch will be returned to the water, where possible.
- All target specimens will be retrieved from the nets, euthanised, then prepared for processing to the laboratory. Target fish will be euthanized by blunt force trauma, followed by exsanguination. No compositing will be undertaken in the field.
- Whole samples will be placed on the first identification board, and assigned one of three groupings; Group PR, Group GX or Group GY by the environmental consultant. Groupings are presented in **Table 1**. The species will be logged and measured to confirm if the sample is the legal length, where applicable.
- Where sample does not meet the legal requirements, the sample details will still be recorded, but returned to the water.
- If sample meets the appropriate requirements, it will be placed in Bucket 1 and rinsed of foreign matter.
- The sample will be assigned a sample ID, as per the sample naming system presented in **Table 2** below. The sample will be moved from Bucket 1 and euthanized.
- The sample will be weighed and the weight recorded together with the biometric information as per **Table 3**. Where the specie is from one of the sample groups that are to be composited, sufficient species will be grouped together, with sufficient mass, to form the one sample (with one sample ID).
- After weighing, the sample will be placed in Bucket 2 (containing DI water), scrubbed with a brush and rinsed, the sample will then be rinsed in Bucket 3. The sample will be photographed after it is rinsed. Rinsate samples will be collected as documented in the OMP.
- The sample will be placed into the appropriate sample containers and labelled with the ID. In addition, the sample will also be labelled with the time the sample was bagged and weight of the sample. The sample will be photographed after it is bagged.
- Samples will be placed on ice, the chain of custody (CoC) documentation completed including the job number. Date and time of sample collection, sample ID, name of sampler, laboratory to be used, analyses required, any comments and signatures of the sampler and laboratory receiver.
- The samples will be transported to the laboratory as soon as practicable.
- Upon receipt of the original documents accompanying the samples at the laboratory, the laboratory will provide a sample receipt document (noting temperature of samples upon receipt, analyses required and any non-conformances) and return the signed CoC form to confirm analyses to be performed. Subject to laboratory processing times the samples will be processed and dissected on the day following capture (within the laboratory).

On Leaving Site

- Place all specimens in appropriate containers and chilled.
- Ensure all samples are appropriately labelled and kept out of sunlight once sampled.
- Call the laboratory and let them know that the samples are being delivered.
- Follow the communications plan detailed in the HASP on demobilisation from site.

5.0 Sample Preparation

As noted in **Section 4.0**, samples are caught whole, washed at the point of sampling and then transported to the laboratory.

The samples will be registered in line with the laboratory procedures (as noted in **Section 4.0**).

Two types of sample preparation will be required depending on the Biota Group:

- Group PR will be prepared as composite samples as detailed in **Section 5.1**; and
- Group X and Group Y will be prepared as whole samples.

5.1 Composite sampling (prawns)

This step relates to samples with an ID relating to Group PR.

The sample will be removed from its storage container and deshelled. The edible portion of the sample will be removed from the remainder of the sample. The portion of the sample removed from the shell will be weighed and recorded.

The deshelled portion will be placed into an appropriate container.

All surfaces and equipment discarded or cleaned with scrubbing and clean water between each sample. Knife mill and homogeniser cleaned with PFAS-free detergent and clean water.

All samples to be held will be placed into appropriate storage containers and placed in freezers in the laboratory.

5.2 Whole samples (fillets)

This step relates to samples with an ID relating to Group GX and Group GY.

The sample will be descaled and gutted.

If the contents of the gut are identifiable, it will be recorded.

Where fish gonads (i.e. roe and milt) are present, they will be removed from the fish and recorded. The fish gonads will be placed in separate containers and assigned an ID of the parent fish, with a sub ID GONADS. The sample will be frozen and placed on hold and will be analysed, pending discussion with project team.

Once the sample is descaled and gutted, the sample will be filleted with the skin intact. The right side fillet will be used as the primary sample and the left side fillet will be placed on hold. Where a fish is earmarked for duplicate or triplicate analysis the left fillet of the primary will be used.

All surfaces and equipment discarded or cleaned with scrubbing and clean water between each sample. Knife mill and homogeniser cleaned with PFAS-free detergent and clean water.

5.3 Sample Details

The length for each species is provided in **Table 1**, below.

Table 1 Species List and Groupings

Species	Legal length* cm Saltwater
PR	
School Prawn (<i>Metapenaeus macleayi</i>)	-
Group GX	
Dusky Flathead (<i>Platycephalus fuscus</i>)	36
Group GY	
Luderick (<i>Girella tricuspidata</i>)	27

*Legal Length (should be confirmed with NSW DPI website at the time of sampling)

The sample nomenclature is presented in **Table 2**, the example shows that sampling occurs in Fullerton Cove (FC) with one dusky flathead, one luderick and one school prawn caught.

Table 2 Sampling Nomenclature

Site	Species Group	Sample number	Date	Sample ID	Comment
FC	PR	002	20180111	FC_PR_002_20180111	School Prawn
FC	GX	003	20180111	FC_GX_003_20180111	Dusky Flathead
FC	GY	003	20180111	FC_GY_003_20180111	Luderick

The information that is required to be recorded is provided in **Table 3**, below.

Table 3 Information to be recorded per sample

Item
Sampling Location
Date
Time
Weather conditions
Species: Name
Photo
Length
Weight
Observations:
Abundance of species in the area?
Sample Preparation
How was sample caught
Was sample washed
All whole samples will be filleted in the primary laboratory.

DRAFT

Appendix D

PFAS Analytical Suite

Target analytes**Perfluoroalkane sulfonic acids**

PFBS	Perfluorobutane sulfonic acid
PFPeS	Perfluoropentane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFHpS	Perfluoroheptane sulfonic acid
PFOS	Perfluorooctane sulfonic acid
PFDS	Perfluorodecane sulfonic acid

Perfluoroalkyl carboxylic acids

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnDA	Perfluoroundecanoic acid
PFDODA	Perfluorododecanoic acid
PFTTrDA	Perfluorotridecanoic acid
PFTeDA	Perfluorotetradecanoic acid

Perfluoroalkyl sulfonamides

FOSA	Perfluorooctane sulfonamide
MeFOSA	N-Methyl perfluorooctane sulfonamide
EtFOSA	N-Ethyl perfluorooctane sulfonamide
MeFOSE	N-Methyl perfluorooctane sulfonamidoethanol
EtFOSE	N-Ethyl perfluorooctane sulfonamidoethanol
MeFOSAA	N-Methyl perfluorooctane sulfonamidoacetic acid
EtFOSAA	N-Ethyl perfluorooctane sulfonamidoacetic acid

(n:2) Fluorotelomer sulfonic acids

4:2 FTS	4:2 Fluorotelomer sulfonic acid
6:2 FTS	6:2 Fluorotelomer sulfonic acid
8:2 FTS	8:2 Fluorotelomer sulfonic acid
10:2 FTS	10:2 Fluorotelomer sulfonic acid

Appendix H

OMP sampling event
Reports

Appendix H OMP Sampling Event Reports

Sampling Event Report, April 2025

PFAS OMP - RAAF Base Williamtown, 29-Aug-2025

Sampling Event Report, April 2025

PFAS OMP - RAAF Base Williamtown

29-Aug-2025

Doc No. 60739111_OMP_WLM_EventReport_Rev0_250829

Sampling Event Report, April 2025

PFAS OMP - RAAF Base Williamtown

Client: Department of Defence

ABN: 68706814312

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List of Acronyms

Acronym	Term
ADWG	Australian Drinking Water Guidelines
AECOM	AECOM Australia Pty Ltd
AFFF	Aqueous Film Forming Foam
Defence	Department of Defence
DoH	Department of Health
DQI	Data Quality Indicator
DQO	Data Quality Objective
EPC	Exposure Point Concentration
FSANZ	Food Standards Australia New Zealand
HEPA	Heads of Environment Protection Authority
LOR	Limit of Reporting
MW	Monitoring Well
NATA	National Analytical Testing Authority
NEMP	National Environmental Management Plan
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NSW	New South Wales
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
ORP	Oxidation-Reduction Potential
PFAS	Per- and poly-fluoroalkyl substances
PFBS	Perfluorobutane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PMAP	PFAS Management Area Plan
QA/QC	Quality Assurance and Quality Control
RPD	Relative Percentage Difference
SAQP	Sampling and Analysis Quality Plan
SD	Sediment
SER	Sampling Event Report
SW	Surface Water
TOC	Top of Casing

List of Units

Units	Term
°C	Degrees Celsius
µg/L	Micrograms per Litre
µS/cm	MicroSiemens per centimetre
g	Grams
km	Kilometre
L	Litre
m	Metre
mAHD	Metres Australian Height Datum
mbgl	Metres below ground level
mbTOC	Metres below Top of Casing
mg/kg	Milligrams per kilogram
mg/L	Milligrams per Litre
mV	MilliVolts

1.0 Introduction

1.1 General

AECOM Australia Pty Ltd (AECOM) has been engaged by the Department of Defence (Defence) to implement the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) at RAAF Base Williamtown (the 'base,' Site ID 0908) and the Williamtown Management Area in New South Wales (NSW). The location of the base and Management Area is shown in **Figure F1** in **Appendix A**.

The OMP (Defence, 2023b) outlines the sampling requirements for the base and off-base areas within the Management Area.

Following each sampling event, a Sampling Event Report (SER) will be prepared. An Ongoing Monitoring Report (OMR) will be prepared following the completion of each 12-month sampling period.

This SER has been prepared to report the results of the 2025 annual sampling event conducted in April 2025, with additional sampling in May 2025 and June 2025. This SER compares the data collected during this event against specific triggers defined in the OMP (Defence, 2023b), including highlighting first-time detections and/or new exceedances of human health Australian guideline values, namely for perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), perfluorooctanoic acid (PFOA) and perfluorobutane sulfonic acid (PFBS).

This SER has been prepared in accordance with the Defence *Ongoing Monitoring Program Reporting - Guidance* issued in February 2024 (Defence, 2024).

1.2 Objectives

The objectives of this monitoring event were to:

- implement the OMP (Defence, 2023b); and
- collect data that will enable Defence to maintain an up to date understanding of the distribution, concentration, transport, and transformation of PFAS.

The data collected may be used to inform where new risk management actions may be required, or to support a determination that remediation has been completed so far as reasonably practicable, including updates and revisions to the PFAS Management Area Plan (PMAP) (Defence, 2023a).

The objective of this phase of works was to implement the scope of works for the annual sampling event in accordance with the Sampling and Analysis Quality Plan (SAQP) (AECOM, 2025).

2.0 Scope of Work

The scope of work was completed in general accordance with the SAQP (AECOM, 2025), as follows:

- obtain permission (where required) to conduct works at the base, off-base publicly accessible areas and at private properties
- groundwater sampling and collection of water quality parameters at 127 of 136 scheduled monitoring wells and bores (refer to **Table 1** below, and **Figure F2** in **Appendix A** for specific locations)
- groundwater sampling and collection of water quality parameters at 12 of 14 ad hoc monitoring well and bore locations (refer to **Table 1** below, and **Figures F2-1** to **F2-4** in **Appendix A** for specific locations). These locations were added to the SAQP (AECOM, 2025) for the purpose of delineation of PFAS at low level of detection during this annual sampling event. These locations will subsequently be reviewed for potential inclusion in the OMP.
- surface water sampling and collection of water quality parameters at all 25 scheduled surface water locations (refer to **Table 2** below and **Figure F3** in **Appendix A** for specific locations)
- sediment sampling at all 26 scheduled sediment locations (refer to **Table 3** below and **Figure F4** in **Appendix A** for specific locations)
- gauging of groundwater levels in monitoring wells prior to collection of samples and for targeted gauging event (refer to **Table 5** in **Section 4.1** for the targeted gauging event locations)
- collection of field duplicate samples at a rate of 1 in 10 primary samples for water
- collection of field duplicate samples at a rate of 1 in 20 primary samples for sediment
- analysis of samples from 125 of 131 scheduled sampling locations for PFAS full suite at the standard limit of reporting (LOR) and analysis of samples from 65 of 70 scheduled sampling locations for PFAS full suite at the low level LOR
- data management of the OMP field and laboratory data in Defence ESdat database
- preparation of this SER.

The deviations from the scheduled scope of works are discussed in detail in **Section 3.0**.

Note: due to privacy considerations, selected monitoring locations are unable to be shown on the figures in **Appendix A**.

Table 1 Groundwater Sampling Locations

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
On-base	Former and Current Fire Station (Facility 165)	MW196, MW198, MW200, MW201D, MW201S, MW202D, MW202S	Standard	7
	Former DEMS Landfill (Facility 394)	MW171D, MW171S, MW172, MW240D, MW281S, MW282S, MW329, MW340D, MW340S, MW342D, MW344D, MW344S, MW354	Standard	13
	Former Fire Training Area (Facility 479)	MW166, MW167, MW168, MW169D, MW169S	Standard	5
	HWC Pump Station 7 (PS7)	MW134D, MW134I, MW245D, MW245S, MW317D, MW317S	Standard	6
	Lake Cochran	MW108D, MW108S, MW109D, MW175D, MW179D, MW179S, MW466, MW468	Standard	8

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
	North-East Landfill	MW406	Standard	1
	Northern Boundary	MW155	Standard	1
	Trade Waste Treatment (Facility 480)	MW106D, MW106S, MW208, MW210D, MW210S, MW304, MW441, MW886	Standard	8
Off-base	Cabbage Tree Road	MW126S, MW178, POT107	Standard	3
		MW125D, MW125S, MW126D, MW139, MW230S, MW238D*, MW238S*, POT085* Ad hoc location: MW137	Low Level	9
	East of Site - HWC Pump Station 9 (PS9)	MW132D, MW132I, MW318D, MW829, MW897D, MW897S	Standard	6
		MW130D, MW130S, MW159D, MW159S, MW160, MW318S, MW842, MW844	Low Level	8
	East of Site - Moors Drain	MW121, MW161D, MW161S, MW247D, MW247S, POT046	Standard	6
	East of Site – Nelson Bay Road	MW122, MW162D*, MW162S	Low Level	3
	Fullerton Cove	MW147S, MW231S, POT236*	Standard	3
		MW231D, MW147D, MW232D, MW232S, MW270D, MW270S, POT382 Ad hoc locations: MW142D, MW142S, MW144, MW266D*, MW266S, MW536, MW537, MW538, POT303, POT365	Low Level	17
	Lavis Lane	MW195, MW279S	Standard	2
		MW128D, MW128S, MW163, MW316D	Low Level	4
	North of Site - Background	MW264D, MW264S	Low Level	2
	Salt Ash	MW123, MW252S*, MW260S	Standard	3
		MW118, MW255D, MW255S, MW256D, MW256S, MW257D, MW257S, MW260D, POT144 Ad hoc locations: MW165*, MW262D, MW262S	Low Level	12
	South of Site – Nelson Bay Road	MW150D, MW150S	Low Level	2
	Southern Area	MW104D*, MW104S*, MW184D*, MW184S*, MW188D, MW188S, MW731D, MW731S	Standard	8
	Southern Area – Cabbage Tree Road	MW146AD, MW146S, MW271D, MW271S , MW278D, MW278S	Low Level	6
	West of Site	MW107D, MW107S, MW241D, MW241S, MW280S, MW315D, MW315S	Low Level	7
Total				150
* Location not sampled				
Bold text denotes residential private property location				

Table 2 Surface Water Sampling Locations

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
On-base	Dawsons Drain (Lake Cochran)	SW055	Standard	1
	Lake Cochran	SW108, SW110		2
	Moors Drain Catchment	SW582, SW588		2
	On-base Drain (East of Former DEMS Landfill)	SW048		1
	On-base Drain (North of Lake Cochran)	SW047		1
Off-base	Dawsons Drain	SW059, SW060, SW333	Standard	3
	Fourteen Foot Drain	SW062, SW600		2
	Fullerton Cove Ring Drain	SW259		1
	Moors Drain	SW001, SW005, SW006, SW007, SW009, SW011, SW014		7
	Ten Foot Drain	SW081		1
	Tilligerry Creek	SW019 , SW023, SW024, SW079		4
Total				25
Bold text denotes residential private property location				

Table 3 Sediment Sampling Locations

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
On-base	Dawsons Drain (Lake Cochran)	SD055	Standard	1
	Lake Cochran	SD108, SD110		2
	On-base Drain (East of Former DEMS Landfill)	SD048		1
	On-base Drain (North of Lake Cochran)	SD047		1
Off-base	Dawsons Drain	SD059, SD060, SD333	Standard	3
	Fourteen Foot Drain	SD062, SD600		2
	Fullerton Cove (tidal gate outlet)	SD254, SD255, SD326		3
	Fullerton Cove Ring Drain	SD259		1
	Moors Drain	SD001, SD005, SD006, SD007, SD009, SD011, SD014		7
	Ten Foot Drain	SD081		1
	Tilligerry Creek	SD019 , SD023, SD024, SD079		4
Total				26
Bold text denotes residential private property location				

3.0 Deviations from the SAQP

The annual sampling event was completed in general accordance with the SAQP (AECOM, 2025). Deviations from the SAQP are provided in **Table 4** below.

Table 4 Deviations from SAQP

SAQP Deviation	Comment / Justification	Impact on Dataset
Samples, and associated field parameters, were not collected from 9 of the 136 scheduled annual groundwater sampling locations.	MW238D, MW238S, POT085 and POT236 (groundwater sampling locations at private residential properties) were not sampled as access approval from property owners was not received within the sampling period. MW252S (located on Hunter Water land) was not sampled due to flood water covering the monitoring well. The location was visited on separate occasions during the sampling event, however the flood water had not subsided. MW104D, MW104S, MW184D, and MW184S (located at Newcastle Airport) were not sampled as they were destroyed by construction works.	The lack of sampling data at MW238D and MW238S is not considered to present a significant data gap, as a nearby monitoring well (MW139 to the southwest) was able to be sampled. The lack of sampling data at POT085 and POT236 could represent a data gap, given these locations have not been sampled since 2023. However, it is noted that historical data at these locations show stable PFAS concentrations since 2016, either consistently below the level of detection (POT085) or consistently above the adopted drinking water guidelines (POT236). The lack of sampling data at MW252S is considered a potential data gap as there is limited coverage in this area to the east of the base. However, it is noted that historical data at this location shows PFAS concentrations decreasing from 2017, while still consistently above the adopted drinking water guidelines for PFOS and PFHxS. The lack of sampling data at MW104D, MW104S, MW184D, and MW184S is considered a potential data gap as there is limited coverage to the south of the base. However, it is noted that historical data at these locations show PFAS concentrations being stable (for MW104S) or decreasing (for MW104D, MW184S, MW184D) from 2017, and consistently above the adopted drinking water and recreational guidelines.
Field parameters and gauging data were not collected from one of the 136 scheduled annual groundwater sampling locations.	MW406 was sampled however due to an equipment error, the field parameters and gauging data taken at the time of sampling were lost.	The lack of gauging data and water quality parameters at MW406 is not considered to be a significant data gap given that historical field data has been collected and samples for PFAS analysis were collected.

SAQP Deviation	Comment / Justification	Impact on Dataset
Gauging data was not collected from one of the 29 selected monitoring wells for the targeted gauging round.	MW162D was unable to be gauged during the gauging round as the gatic lugs and j-cap were jammed. On a return visit to the location, following repair works, the cap was able to be opened and the location was able to be gauged and sampled.	The lack of gauging data from the gauging round at MW162D is not considered to be a significant data gap, as the other wells in the gauging round were gauged and provided sufficient data for the groundwater elevation plan.
Samples, and associated field parameters, were not collected from two of the 14 planned ad hoc groundwater sampling locations.	MW266D (groundwater monitoring well located on residential property) was not sampled as the gatic bolts were rusted and the well could not be accessed. MW165 (groundwater monitoring well on the road verge) was not sampled as the well could not be located due to overgrown grass.	The lack of sampling data at MW165 is considered to be a potential data gap given the location provides coverage for the boundary of the Broader Management Zone to the east of the base. It is noted that historical data at this location, from 2016 to 2019, show PFAS concentrations below the standard level of detection. The lack of sampling data at MW266D is not considered a significant data gap given the nearby shallow well (MW266S) was able to be sampled.
Change in adopted Human Health (Drinking Water) screening criteria	In June 2025, the National Health and Medical Research Council (NHMRC) released updated drinking water guidelines for PFOS, PFHxS, PFOA and PFBS. As a result, AECOM has adopted these revised drinking water criteria for this sampling event, superseding the drinking water criteria presented in the SAQP (AECOM, 2025) and in the OMP (Defence, 2023b) which were sourced from the PFAS National Environmental Management Plan (NEMP) 3.0 (HEPA 2025).	The revised drinking water screening criteria for PFOS is 0.008 µg/L, which is below the standard laboratory LOR (0.02 µg/L). In anticipation of the NHMRC (2025) being released, AECOM scheduled selected samples (from locations where concentrations were historically either below the laboratory LOR or below the former drinking water screening criteria) for low level PFAS analysis. However, a number of groundwater samples remained scheduled for standard LOR analysis in the SAQP (AECOM, 2025). For those samples (collected from MW108D, MW134D, MW134I, MW240D, MW245D, MW317D, MW340S, and MW406), the LOR for PFOS was above the updated ADGW (NHMRC, 2025). As a result, where those samples were below the LOR, they were not able to be compared to the adopted drinking water criteria.

4.0 Methodology

4.1 Sampling Methodology

The methodology used for the annual sampling event was in general accordance with the SAQP (AECOM, 2025) and is summarised in **Table 5** below.

Table 5 Sampling Methodology

Item	Details
Groundwater gauging	The depth to groundwater was measured in each monitoring well immediately prior to collection of groundwater samples (where sampling was required) using an interface probe. In addition, a targeted gauging round including 29 selected monitoring wells was completed to generate data for the groundwater elevation contours and assess groundwater flow direction. The targeted gauging round was completed on 1 April 2025. The selected locations for the targeted gauging event are as follows: • shallow wells: MW106S, MW122, MW123, MW124, MW125S, MW126S, MW146S, MW162S, MW188S, MW232S, MW247S, MW256S, MW257S, MW260S, MW268S and MW897S • deep monitoring wells: MW106D, MW125D, MW126D, MW146AD, MW162D, MW188D, MW232D, MW247D, MW256D, MW257D, MW260D, MW268D and MW897D. Measurements of depth to groundwater were undertaken using a decontaminated interface probe, which was serviced by the supplier prior to use. The equipment supplier records are provided in Appendix C.
Field parameters	Temperature, electrical conductivity, dissolved oxygen, oxidation-reduction potential (ORP), pH and observations of water quality were recorded for groundwater and surface water samples. Water quality parameters were collected using a calibrated water quality meter. The equipment supplier service and calibration records, and field calibration records are provided in Appendix C.
Sampling methodology	Groundwater Monitoring Wells Groundwater samples were collected from monitoring wells using a no-purge methodology with HydraSleeves™ which were installed within the screened interval of the wells and avoiding placing the base of the HydraSleeves™ at the base of the monitoring well, where a build-up of sediment may be present. The installation depth of the HydraSleeves™ was recorded (as HydraSleeve™ collar depth in metres below top of casing [mbTOC]). HydraSleeves™, with bottom weights only, were installed / deployed in monitoring wells for a minimum of 4 hours prior to sampling, to allow the aquifer to equilibrate before the samples were collected. For this event, the HydraSleeves™ were installed ahead of / during the annual sampling event. Following sampling, water quality parameters were recorded ex-situ, from excess water present in the HydraSleeve™. As per the SAQP (AECOM, 2025), the groundwater sample from MW829 was collected using a dedicated disposable HDPE bailer, as this pump station bore/sampling point is a non-traditional well with no well cap or gatic, and groundwater from monitoring wells MW842 and MW844 were collected using a peristaltic pump, due to the narrow diameter of the PVC casing being too small for HydraSleeves™.

Item	Details
	Residential Bores Bore water samples were collected by placing the new laboratory provided sample bottles beneath the tap outlet and the tap slowly opened to collect the “first flush” of water, with the caps immediately installed once the containers were full. Following sampling, water quality parameters were recorded ex-situ, by placing the water quality meter probe in a cup filled with bore water from the tap outlet. Surface Water Surface water samples were collected from either mid-way through the water column or approximately 0.5 m below the surface (if possible) using a ‘grab’ sample method, without disturbing the bottom of the surface water body and without capturing any surface film, to minimise collection of sediment, or floating materials in the samples. At each location, new laboratory supplied containers were lowered into the water with the caps immediately applied once the containers were full. Where sampling points were not able to be accessed safely, surface water samples were collected with use of a sampling pole. Description of each sampling location were recorded (including physical setting, flow observations, presence of sheen or foam etc). Sediment Sediment samples were collected from a depth representative of potentially deposited sediments and collected from within the water body, using a hand trowel to a maximum depth of 0.3 m below the sediment surface. A new laboratory supplied container was used at each location for collection of samples, and any reusable sampling equipment (i.e. trowel) utilised was de-contaminated between locations. Description of each sampling location and the sample material was recorded.
QA/QC Samples	A Quality Assurance and Quality Control (QA/QC) program was implemented for the sampling and analysis program in order to obtain representative data and assess the reliability of the data obtained. To facilitate the QA/QC program the following sample types were obtained during the sampling program: • <i>Intra-laboratory duplicates</i> collected at a rate of 1 in 10 primary samples for water matrices and 1 in 20 for sediment matrices. The relative percentage difference (RPD) should be less than 30%, or less than 50% if results are less than 20 times the LOR. Higher RPDs may also be acceptable if results are less than 10 times the LOR. • <i>Inter-laboratory duplicates</i> collected at a rate of 1 in 10 primary samples for water matrices and 1 in 20 for sediment matrices. The RPD should be less than 30%, or less than 50% if results are less than 20 times the LOR. Higher RPDs may also be acceptable if results are less than 10 times the LOR. • <i>Rinsate blanks</i> collected at a frequency of one per set of sampling equipment per day where equipment was reused between locations. Analytical results should be below the laboratory LOR. The QA/QC samples for the annual sampling event included: • 19 x intra-laboratory duplicates comprising 17 water (15 groundwater, 2 surface water) and 2 sediment, which met the total target frequency

Item	Details
	19 x inter-laboratory duplicates, comprising 17 water (16 groundwater, 1 surface water) and 2 sediment, which met the total target frequency 13 x rinsate blanks, which met the total target frequency. The total number of primary samples collected amounts to 194 samples, comprising 167 samples for water (142 groundwater, 25 surface water) and 27 samples for sediment. The detailed data validation assessment is presented in Appendix D.
Sample analysis	Samples were submitted for PFAS full suite analysis using standard level of detection (i.e. standard LOR), with the exception of select groundwater monitoring locations submitted for low level of detection (i.e. low level LOR) (refer to Table 1 in Section 2.0 for specific locations). ALS Environmental (ALS) Sydney, NSW was used as the primary laboratory. Envirolab Services (Envirolab) Sydney, NSW was used as the secondary laboratory. ALS and Envirolab methods for analyses were certified by the National Association of Testing Authorities (NATA). A summary of the laboratory results is presented in Section 5.3 and the laboratory certificates are presented in Appendix E.

4.2 Adopted Screening Criteria

Guidance documents used to assess the dataset include the following:

- PFAS National Environmental Management Plan (NEMP) Version 3.0, Heads of EPA (HEPA) Australia and New Zealand. March 2025 (HEPA, 2025)
- Department of Health (DoH), 2017. *Health Based Guidance Values for PFAS for use in site investigations in Australia*. April 2017.
- National Health and Medical Research Council (NHMRC), 2019. *Guidance on PFAS in Recreational Water*. August 2019.
- NHMRC, 2025. *Australian Drinking Water Guidelines 6, 2011 - National Water Quality Management Strategy*. Version 4.0 Updated June 2025.

The adopted PFAS screening criteria to assess the data generated as part of the OMP are presented in **Table 6** below. It is noted that at the time of preparing this report, the PFAS NEMP 3.0 (HEPA, 2025) did not provide any screening criteria for PFAS in sediments.

Table 6 Summary of Adopted Screening Criteria: Water

Media	Pathway	Compound	Criteria	Comment/Reference
Human Health Receptors				
Water – Groundwater	Drinking water	PFOS	0.008 µg/L	The values are from the ADWG (NHMRC, 2025) which includes revised guidance criteria for PFOS, PFHxS, PFOA and PFBS, released in June 2025. <i>All groundwater results were compared to these criteria.</i>
		PFHxS	0.03 µg/L	
		PFOA	0.2 µg/L	
		PFBS	1 µg/L	
Water – Surface Water and Groundwater	Recreational use	PFOS + PFHxS	2 µg/L	The values are from the PFAS NEMP (HEPA, 2025) which are based on the NHMRC (2019) values. Note: given that groundwater at the base is extracted for irrigation purposes (post treatment), the recreational guidelines have been adopted to be protective of this water use activity. Note: groundwater at the base was also screened against the drinking water guidelines as specified above. <i>All surface water and groundwater results were compared to these criteria.</i>
		PFOA	10 µg/L	
Ecological Receptors				
Water – Groundwater and Surface Water	Freshwater	PFOS	0.00023 µg/L	The values are from the PFAS NEMP (HEPA, 2025) which endorsed the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2023). The 99% species protection level has been applied for high value conservation systems. This approach is generally adopted for chemicals that bioaccumulate and biomagnify in wildlife. It is proposed that the laboratory LOR is adopted for the purposes of preliminary screening of analytical water results, rather than sole use of the criteria value. <i>All groundwater and surface water results were compared to these criteria.</i>
		PFOA	19 µg/L	

4.3 Triggers Levels

The following trigger levels as presented in the OMP (Defence, 2023b) have also been assessed:

- First-time detection of PFAS in groundwater / surface water
- First-time exceedance of the drinking water guideline in groundwater
- First-time exceedance of the recreational water guideline in surface water

- First-time exceedance in groundwater of the groundwater exposure point concentration (EPC) used in the Human Health Risk Assessment (HHRA) (AECOM, 2017b) for the relevant Risk Zone¹:
 - o Risk Zone A – PFOS+PFHxS: 190.3 µg/L
 - o Risk Zone B – PFOS+PFHxS: 5.67 µg/L
 - o Risk Zone C & D – PFOS+PFHxS: 0.05 µg/L
- First-time exceedance in surface water of the surface water EPC for 95th percentile used in the 2017 HHRA (AECOM, 2017b):
 - o Marine Water - PFOS: 1.78 µg/L, PFHxS: 1.48 µg/L
 - o Region 1 – PFOS: 5.035 µg/L, PFHxS: 1.666 µg/L
 - o Region 2 – PFOS: 1.47 µg/L, PFHxS: 1.009 µg/L
 - o Region 3 – PFOS: 7.743 µg/L, PFHxS: 6.773 µg/L
- Sediment PFAS concentration increase in two consecutive sampling events

Note that PFAS trends will be reviewed and discussed in the next OMR, together with a review of the CSM and risk profile.

4.4 Data Quality Objectives and Data Validation

The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (AECOM, 2025). The data validation assessment is provided in **Appendix D**.

Data validation procedures employed in the assessment of the field and laboratory's Quality Assurance and Quality Control data, completed as per Section 3.2 of the SAQP, indicated that the reported analytical results are representative of the sample locations and that the overall quality of the analytical data produced is acceptably reliable (i.e. >95% of the data was suitable for use and DQIs passed acceptance criteria) for the purpose of this SER.

Following the reporting of PFAS concentrations which were either exceeding an OMP trigger level or were considered to potentially be anomalous, the primary laboratory was requested to repeat the analysis for MW231S, MW262S, MW538, and SD326. The reanalysis and originally reported PFAS concentrations were within an order of magnitude of each other and the primary laboratory did not identify any procedural or analytical errors pertaining to their analysis. As such, the most conservative, originally reported concentrations have been retained and used in this report.

Further details are provided in the data validation assessment in **Appendix D**.

All data collected during this event have been reviewed and uploaded to the Defence ESdat database in accordance with Defence Contamination Management Manual requirements.

¹ Risk Zones and Regions as defined in the HHRA (AECOM, 2017b), detailed below. The extent of the Risk Zones and Regions are shown in the HHRA (2017b) maps displayed in **Appendix F** of this report.

- **Marine Water:** various water bodies such as those associated with Port Stephens and Hunter River (i.e. Fullerton Cove for the purpose of the OMP)
- **Region 1:** the area east of the base, generally following Moors Drain and discharging at the tidal portion of Tilligerry Creek.
- **Region 2:** the area along Tilligerry Creek south east of the base which discharges in the tidal portion of Tilligerry Creek
- **Region 3:** the surface water drainage network south of the base, which predominantly discharges at Fullerton Cove.
- **Risk Zone A** is defined by the footprint of the Southern Area, which includes a portion of Region 3.
- **Risk Zone B** is defined by the footprint of the Eastern Area, which includes a portion of both Region 1 and Region 3.
- **Risk Zone C** is defined by that portion of the footprint of the remaining area, which corresponds with Region 1 and Region 3.
- **Risk Zone D** is defined by that portion of the footprint of the remaining area, which corresponds with Region 2.

5.0 Field Observations and Results

5.1 General Observations

The weather conditions and general observations (including activities that may impact the monitoring program) recorded during the annual sampling event are summarised below in Table 7.

The sampling event and related activities, such as the deployment of HydraSleeves™ and the gauging event, took place between 31 March 2025 and 17 April 2025, with subsequent visits on 26 and 27 May 2025 and 10 June 2025.

Table 7 General Observations

Items	Observations
Weather Conditions	The following weather observations are for Williamtown (Williamtown RAAF, Station 061078) (Bureau of Meteorology, 2025). Maximum daily temperatures across the sampling event days ranged between 17.4 °C (10 June 2025) and 28.2 °C (11 April 2025). The monthly mean maximum temperature for April, May and June were 24.7 °C, 20.5 °C and 17.5 °C, respectively. Rainfall was recorded across 2, 4, 12, 13, and 14 April 2025, as well as on 27 May 2025. Across the sampling event days, a total of 62 mm of rainfall were recorded. The monthly totals for April, May and June were 180 mm, 502 mm and 65.4 mm of rainfall, respectively.
Estate Management Works, Training Activities and/or Construction Works.	No estate management works, training activities or construction works, with the potential to impact the program, were observed during the sampling event.

5.2 Field Observations and Measurements

The observations and measurements recorded during the field activities are summarised in **Table 8**, below.

Table 8 Field Observations and Measurements

Item	Description
Monitoring Well Network Condition	The following observations of the well network were noted: - MW106S, MW126S, MW132I, MW162S, MW168, MW169D: well gatic lugs for bolts were rusted. - MW108D, MW125S, MW125D, MW128D, MW146S, MW188S, MW231S, MW271S, MW281S: well gatic lid unable to be closed due to the PVC and/or J-cap height. - MW106S, MW107D, MW107S, MW168, MW169S, MW230S, MW278S, MW280S: well gatic bolts were missing, however unable to be replaced due to rusting of lugs (MW106S, MW168, MW169S, MW169D) or non-standard bolt size (MW107S, MW107D, MW166, MW230S, MW278S, MW280S). - MW232D, MW731D: well monument lid hinge broken. - MW106D, MW108D, MW108S, MW172, MW179D, MW264S: wells may have a blockage close to the base of the wells. Note that groundwater was able to be sampled from within the screen interval (for sampling locations), and therefore considered representative.

Item	Description
	- MW109D: well gatic was full of water above the top of casing. The water was removed prior to sampling. Given the J-cap was secure, water ingress into the well was unlikely, and the groundwater sampled was considered representative. - MW162D: the well casing had moved within the gatic, and as a result it was not possible to remove the J-cap to sample during the initial visit. This well was repaired and sampled on a later mobilisation.
Water Observations	No visible signs of contamination were observed in the groundwater and surface water locations sampled. Organic and sulphurous odours were noted at 51 groundwater locations (refer to Table T2 in Appendix B) and two surface water locations (SW582 and SW600).
Depth to Groundwater and Flow Direction	During the sampling event, depth to groundwater ranged from 0.000 (MW108S, MW109D, MW231D, MW266S and MW886) and 3.650 (MW304) mbTOC, and groundwater elevation ranged between -0.038 (MW128S) and 8.663 (MW264D) metres Australian Height Datum (mAHD). Groundwater gauging data is presented in Table T1 in Appendix B. The inferred groundwater flow direction is to the south and southeast, towards Tilligerry Creek and Fourteen Foot Drain, and to the north and northeast, south of Tilligerry Creek, Fourteen Foot Drain and Ten Foot Drain (refer to Figure F5-1 and F5-2 in Appendix A), which was generally consistent with previous flow directions. Note that the groundwater elevation contours in Figure F5-1 and Figure F5-2 are based on the gauging 28 of 29 selected wells on 1 April 2025, to minimise the potential for temporal variability.
Water Quality Parameters	Groundwater and surface water quality parameters were measured during the collection of water samples. The readings are presented in Table T2 and Table T3 in Appendix B and are summarised below: Groundwater Quality Parameters - Dissolved oxygen ranged from 0.69 mg/L (MW262S) to 8.13 mg/L (MW231D) indicating poor to well oxygenated conditions. - Electrical conductivity ranged from 40.6 µS/cm (MW257D) to 41,842 µS/cm (MW266S) indicating fresh to saline conditions. - pH ranged from 4.11 (MW245S) to 7.82 (MW128D) indicating acidic to mildly alkaline conditions. - ORP (corrected) ranged from -1.7 mV (MW231D) to 438.4 mV (MW829) indicating reducing to mildly oxidising conditions. - Temperature ranged from 17.0°C (MW262D) to 26.9°C (POT144). Surface Water Quality Parameters - Dissolved oxygen ranged from 1.39 mg/L (SW588) to 9.72 mg/L (SW600) indicating moderately to well oxygenated conditions. - Electrical conductivity ranged from 86.4 µS/cm (SW048) to 9,934 µS/cm (SW259) indicating fresh to brackish conditions. - pH ranged from 5.09 (SW001 and SW059) to 7.21 (SW019) indicating mildly acidic to near neutral conditions. - ORP (corrected) ranged from 188 mV (SW019) to 390.9 mV (SW059) indicating mildly reducing to mildly oxidising conditions.

Item	Description
	Temperature ranged from 17.9°C (SW006) to 26.3°C (SW600).
Sediment Observations	Sediment sampled and logged during this sampling event comprised sand, silt and clay materials with varying amounts of organic material inclusions (roots, leaves, grass) and, for some materials, traces of gravels or shell fragments. Organic odours were noted in three sediment locations (SD005, SD081 and SD600). Refer to in Table T4 in Appendix B for a summary of sediment classifications and observations.

5.3 Summary of Analytical Results

5.3.1 Groundwater Analytical Results

The groundwater PFAS analytical results from this sampling event are presented in **Table T5 in Appendix B**. In summary, 139 primary groundwater samples were analysed for PFAS during this sampling event, of these:

- 120 primary samples reported concentrations of PFAS with Australian guideline values (PFOA, PFOS, PFHxS, and PFBS) above the adopted laboratory LOR
- 86 primary samples exceeded the adopted human health drinking water screening criteria for PFOA, PFOS, PFHxS and/or PFBS
- 26 primary samples exceeded the adopted human health recreational water screening criteria for PFOA and/or PFOS+PFHxS
- 104 primary samples exceeded the adopted ecological screening criteria for PFOA and/or PFOS.

The groundwater sampling locations, their sampling status and applicable triggers are presented in **Figures F6-1 to 6-4 in Appendix A**.

5.3.2 Surface Water Analytical Results

The surface water PFAS analytical results from this sampling event are presented in **Table T6 in Appendix B**. In summary, 27 primary surface water samples were analysed for PFAS during this sampling event, of these:

- 25 primary samples reported concentrations of PFAS with Australian guideline values (PFOA, PFOS, PFHxS, and PFBS) above the adopted laboratory LOR
- 12 primary samples exceeded the adopted human health recreational water screening criteria for PFOA and/or PFOS+PFHxS
- 25 primary samples exceeded the adopted ecological screening criteria for PFOA and/or PFOS.

The surface water sampling locations, their sampling status and any applicable triggers are presented in **Figure F7 in Appendix A**.

5.3.3 Sediment Analytical Results

The sediment PFAS analytical results from this sampling event are presented in **Table T7 in Appendix B**. In summary, 26 primary sediment samples were analysed for PFAS during this sampling event. All 26 primary samples reported concentrations of PFAS with Australian guideline values (PFOA, PFOS, PFHxS, and PFBS) above the adopted laboratory LOR.

The sediment sampling locations, their sampling status and any applicable triggers are presented in **Figure F8 in Appendix A**.

5.3.4 Historical Analytical Results

The groundwater, surface water and sediment PFAS analytical results from this sampling event as well as historical data for all locations currently in the OMP scope, as per the SAQP (AECOM, 2025), are presented in **Table T8**, **Table T9** and **Table T10** (respectively) in **Appendix B**.

5.4 Trigger Levels Assessment

The assessment of analytical results from this sampling event against the OMP trigger levels and associated responses is presented in **Table 9**.

Table 9 Trigger Levels Assessment

Trigger Type	Analyte	Triggers in Annual Sampling Event Data Location (Concentration)	Responses
First-time detection of PFAS (for PFAS with Australian guideline values), in groundwater and surface water. <i>Note: These triggers are highlighted in blue in the result figure, Figure F6 in Appendix A, and in the analytical table, Table T8 in Appendix B. Where the trigger is also a first-time exceedance of human health guidelines, these are highlighted in yellow.</i> <i>Additionally, the first-time detections of PFOS are also first-time exceedances of the adopted ecological guideline (HEPA, 2025) – while not an OMP trigger, these have also been highlighted in yellow along with first-time exceedances of adopted human health criteria.</i>	PFOA	- MW230S (0.004 µg/L) - MW271S (0.003 µg/L) - MW538 (0.011 µg/L)	- The majority of the first-time detections reported for groundwater sampling locations are due to the use of low level LOR (i.e. using the more sensitive test). As such, in most cases PFAS was found to be present when previously (using the standard LOR), the PFAS was not detected. - Some of the first-time detections (namely MW144, MW262S, MW536, MW537 and MW538) were not due to the use of low level LOR (i.e. the concentrations exceeded the standard LOR). It is noted that these locations (MW144, MW262S, MW536, MW537 and MW538) are ad hoc selected for sampling during the annual sampling event and had not been sampled since 2017. - Several samples were requested to be reanalysed by the primary laboratory to verify the detections. The reanalysis confirmed the detections and the laboratory did not identify any procedural or analytical errors pertaining to their analysis. Further details are provided in the data validation assessment in Appendix D. - No changes to the monitoring frequency is considered to be warranted following a review of these exceedances for the OMP monitoring locations.
	PFOS	- MW122 (0.002 µg/L) - MW139 (0.002 µg/L) - MW142D (0.004 µg/L) - MW142S (0.007 µg/L) - MW144 (0.069 µg/L) - MW255S (0.004 µg/L) - MW260D (0.002 µg/L) - MW262S (0.033 µg/L) - MW264D (0.005-0.008 µg/L) - MW266S (0.005 µg/L) - MW536 (0.038 µg/L) - MW537 (0.012 µg/L) - MW538 (0.235 µg/L) - POT365 (0.002 µg/L)	
		- MW139 (0.002 µg/L) - MW142D (0.004 µg/L) - MW142S (0.007 µg/L) - MW144 (0.069 µg/L) - MW255S (0.004 µg/L) - MW260D (0.002 µg/L) - MW262S (0.033 µg/L) - MW264D (0.005-0.008 µg/L) - MW266S (0.005 µg/L) - MW536 (0.038 µg/L) - MW537 (0.012 µg/L) - MW538 (0.235 µg/L) - POT365 (0.002 µg/L)	

Trigger Type	Analyte	Triggers in Annual Sampling Event Data Location (Concentration)	Responses
	PFHxS	- MW107D (0.007 µg/L) - MW118 (0.004 µg/L) - MW139 (0.002 µg/L) - MW144 (0.017 µg/L) - MW163 (0.006-0.007 µg/L) - MW255S (0.002 µg/L) - MW262S (0.016 µg/L) - MW264D (0.002 µg/L) - MW278S (0.002 µg/L) - MW536 (0.014 µg/L) - MW537 (0.011 µg/L) - MW538 (0.195 µg/L) - MW842 (0.003 µg/L)	
	PFOS+ PFHxS	- MW118 (0.004 µg/L) - MW139 (0.004 µg/L) - MW142D (0.004 µg/L) - MW142S (0.007 µg/L) - MW144 (0.086 µg/L) - MW255S (0.006 µg/L) - MW262S (0.049 µg/L) - MW264D (0.005-0.01 µg/L) - MW266S (0.005 µg/L) - MW536 (0.052 µg/L) - MW537 (0.023 µg/L) - MW538 (0.43 µg/L) - POT365 (0.002 µg/L)	
	PFBS	- MW122 (0.002 µg/L) - MW163 (0.003 µg/L) - MW230S (0.007 µg/L) - MW260D (0.007 µg/L) - MW538 (0.052 µg/L)	

Trigger Type	Analyte	Triggers in Annual Sampling Event Data Location (Concentration)	Responses
First-time exceedance of the drinking water guideline (revised in June 2025 by NHMRC) in groundwater. PFOA: 0.2 µg/L PFOS: 0.008 µg/L PFHxS: 0.03 µg/L PFBS: 1 µg/L <i>Note: These triggers are highlighted in yellow in the result figure, Figure F6 in Appendix A, and in the analytical table, Table T8 in Appendix B.</i>	PFOA	Nil	- The first-time exceedances at MW128S, MW144, MW262S, MW536, MW537 and MW538 were not due to the use of low level LOR (i.e. the concentrations exceeded the standard LOR). It is noted that majority of these locations (namely MW144, MW262S, MW536, MW537 and MW538) are ad hoc, selected for sampling during the annual sampling event and had not been sampled since 2017. - Several samples (including MW262S and MW538) were requested to be reanalysed by the primary laboratory to verify the exceedances. The reanalysis confirmed the exceedances and the laboratory did not identify any procedural or analytical errors pertaining to their analysis. Further details are provided in the data validation assessment in Appendix D. - Additionally, given MW144, MW262S, MW536, MW537 and MW538 were ad hoc sampling locations not sampled since 2017, rolling averages were not calculated. - The rolling average over a three year period (2023-2025) for PFHxS results from MW128S (0.01 µg/L) remain below the adopted drinking water guidelines. - No changes to the monitoring frequency are considered to be warranted upon review of these exceedances for the OMP monitoring locations.
	PFOS	- MW144 (0.069 µg/L) - MW262S (0.033 µg/L) - MW536 (0.038 µg/L) - MW537 (0.012 µg/L) - MW538 (0.235 µg/L)	
	PFHxS	- MW128S (0.038 µg/L) - MW538 (0.195 µg/L)	
	PFBS	Nil	
First-time exceedance of the recreational water guideline (HEPA, 2025) in surface water: PFOA: 10 µg/L PFOS+PFHxS: 2 µg/L	PFOA	Nil	Nil
	PFOS+PFHxS	Nil	Nil
First-time exceedance in groundwater of the groundwater exposure point	PFOS+PFHxS	- MW144 (0.086 µg/L) [Risk Zone C] - MW231S (0.1 µg/L) [Risk Zone C]	Majority of these locations (namely MW144, MW536, and MW538) are ad hoc, selected for sampling during the

Trigger Type	Analyte	Triggers in Annual Sampling Event Data Location (Concentration)	Responses
concentration (EPC) used in the 2017 HHRA for the relevant Risk Zone: Risk Zone A PFOS+PFHxS: 190.3 µg/L Risk Zone B PFOS+PFHxS: 5.67 µg/L Risk Zone C & D PFOS+PFHxS: 0.05 µg/L <i>Note: These triggers are highlighted in green in the result figure, Figure F6 in Appendix A, and in the analytical table, Table T8 in Appendix B.</i>		- MW536 (0.052 µg/L) [Risk Zone C] - MW538 (0.43 µg/L) [Risk Zone C]	annual sampling event and had not been sampled since 2017. - Several samples (including for MW231S and MW538) were requested to be reanalysed by the primary laboratory to verify the exceedances. The reanalysis confirmed the exceedances and the laboratory did not identify any procedural or analytical errors pertaining to their analysis. Further details are provided in the data validation assessment in Appendix D. - All four groundwater sampling locations (MW144, MW231S, MW536, and MW538) are on private properties within the Secondary Management Zone. There is no change to the risk profile given that the NSW Governments precautionary advice continues to apply to these locations. Additionally, the drinking water pathway is considered to be incomplete given that groundwater is either not used at the property at all (for the property where MW144, MW536 and MW538 are located) or groundwater used at the property is not hydraulically connected to the impacted well (for MW231S).
First-time exceedance in surface water of the surface water EPC for 95 th percentile used in the 2017 HHRA:	PFOS	Nil	Nil
Marine Water PFOS: 1.78 µg/L, PFHxS: 1.48 µg/L Region 1 PFOS: 5.035 µg/L, PFHxS: 1.666 µg/L Region 2 PFOS: 1.47 µg/L, PFHxS: 1.009 µg/L Region 3 PFOS: 7.743 µg/L, PFHxS: 6.773 µg/L	PFHxS	Nil	Nil

Trigger Type	Analyte	Triggers in Annual Sampling Event Data Location (Concentration)	Responses
Sediment PFAS (i.e. Sum of PFAS) concentration increase in two consecutive sampling events.	Sum of PFAS	Nil (where increases in two consecutive sampling events, results were below historical maximums)	Nil

6.0 Upcoming Sampling Event and Reporting

6.1 Upcoming Sampling Events

The next OMP sampling event is scheduled for Q3 2025.

6.2 Upcoming Ongoing Monitoring Report

The next OMR is scheduled to be delivered in Q1 of 2026, covering data collected within the 12-month sampling period between January 2025 and December 2025.

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Appendix A

Figures

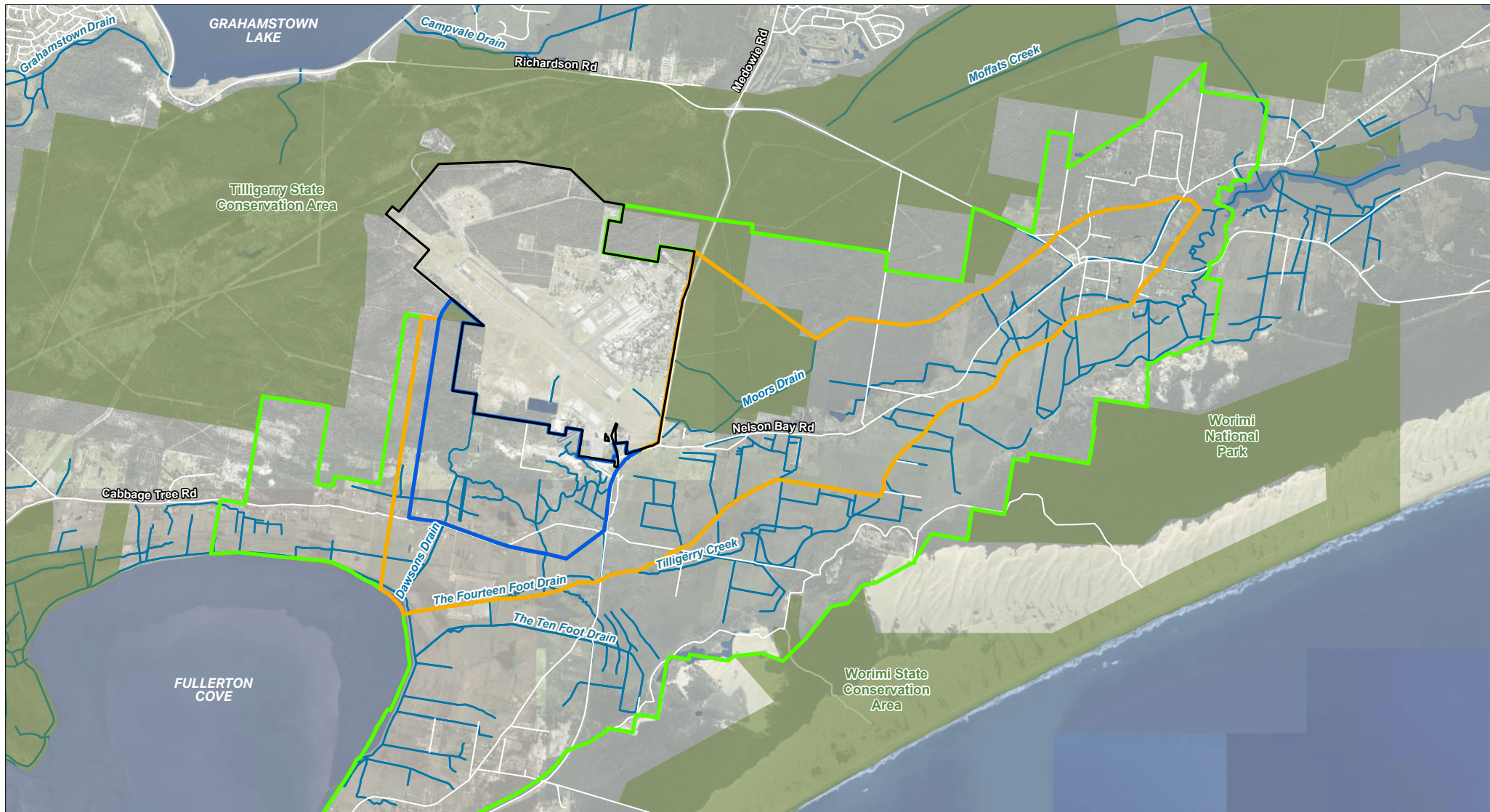


FIGURE F1: SITE LAYOUT

Legend

- | | | | |
|--|---------------------------|---|--------------|
|  | Active Base Boundary |  | NPWS Reserve |
|  | Primary Management Zone |  | Waterway |
|  | Secondary Management Zone | | |
|  | Broader Management Zone | | |



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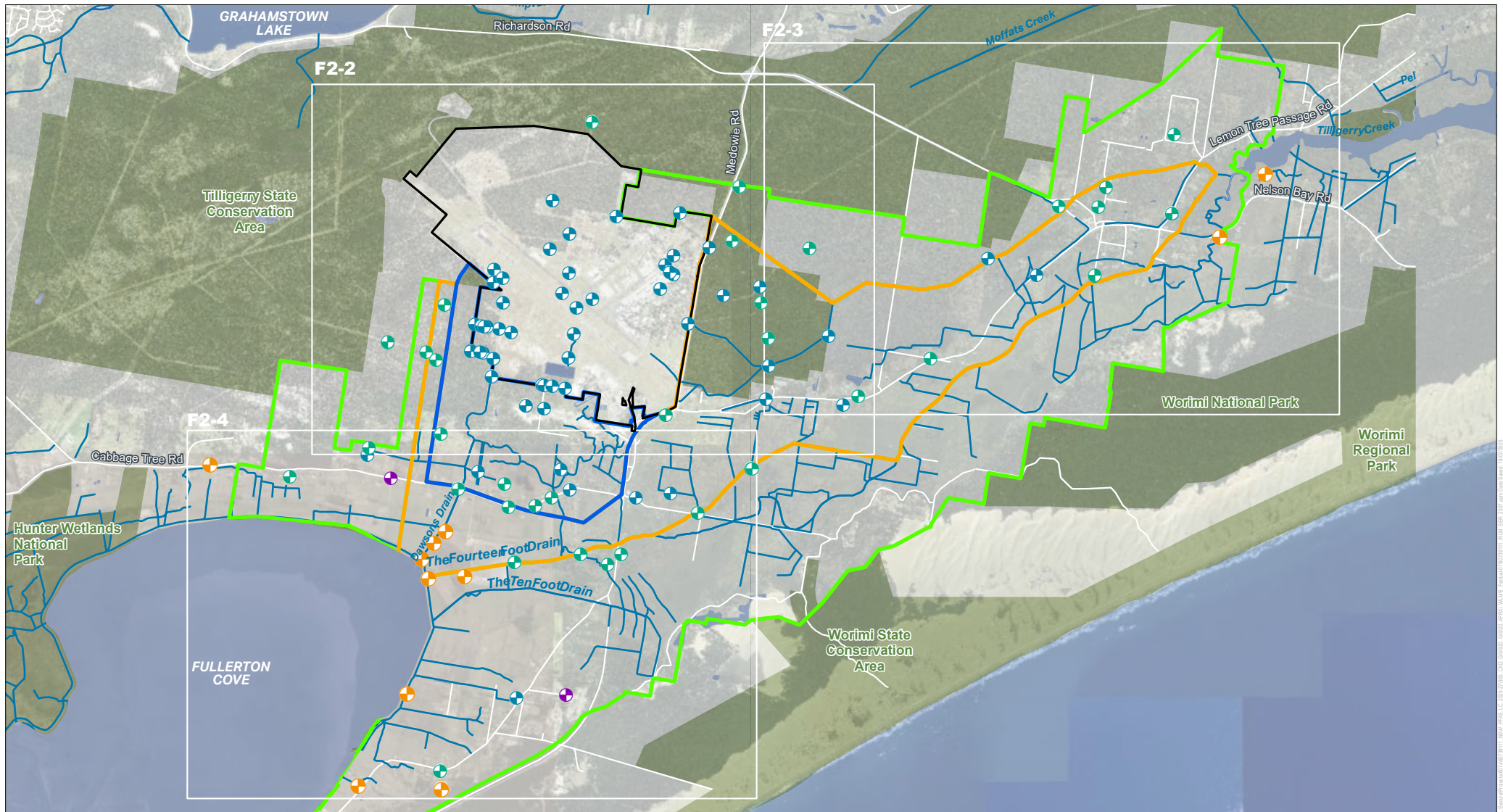


FIGURE F2-1: MONITORING OVERVIEW

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- NPWS Reserve
- Waterway
- Groundwater Sampling Location - OMP - AdHoc (April-June 2025)
- Groundwater Sampling Location - OMP - Low Level LOR Analysis
- Groundwater Sampling Location - OMP - Standard Level LOR Analysis
- Groundwater Sampling Location - OMP - Gauge Only



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Legend

-  Groundwater Sampling Location - OMP - AdHoc (April-June 2025)
-  Groundwater Sampling Location - OMP - Low Level LOR Analysis
-  Groundwater Sampling Location - OMP - Standard Level LOR Analysis
-  Groundwater Sampling Location - OMP - Gauge Only



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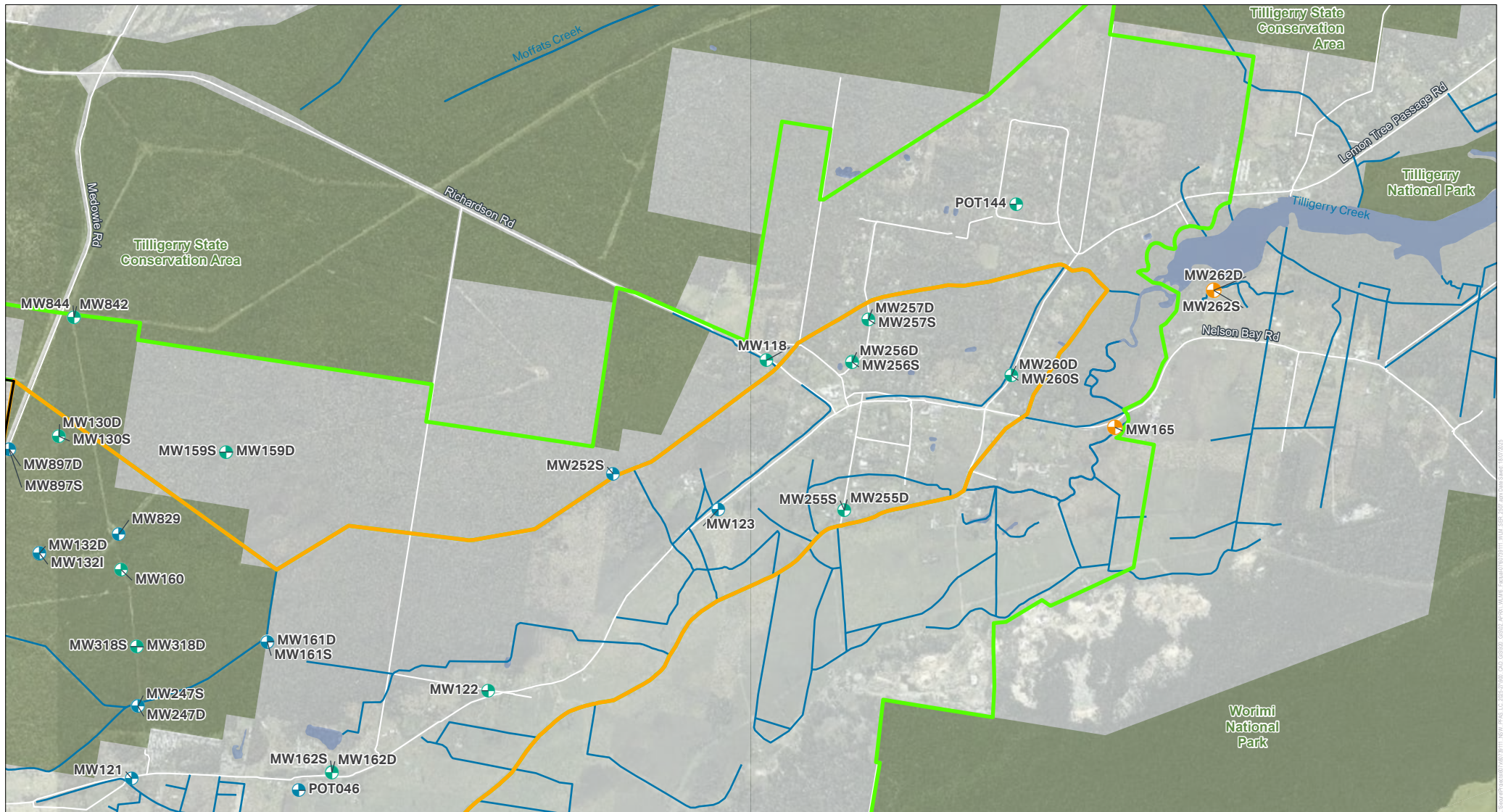


FIGURE F2-3: GROUNDWATER MONITORING LOCATIONS - EAST

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- Groundwater Sampling Location - OMP - AdHoc (April-June 2025)
- Groundwater Sampling Location - OMP - Low Level LOR Analysis
- Groundwater Sampling Location - OMP - Standard Level LOR Analysis
- Groundwater Sampling Location - OMP - Gauge Only



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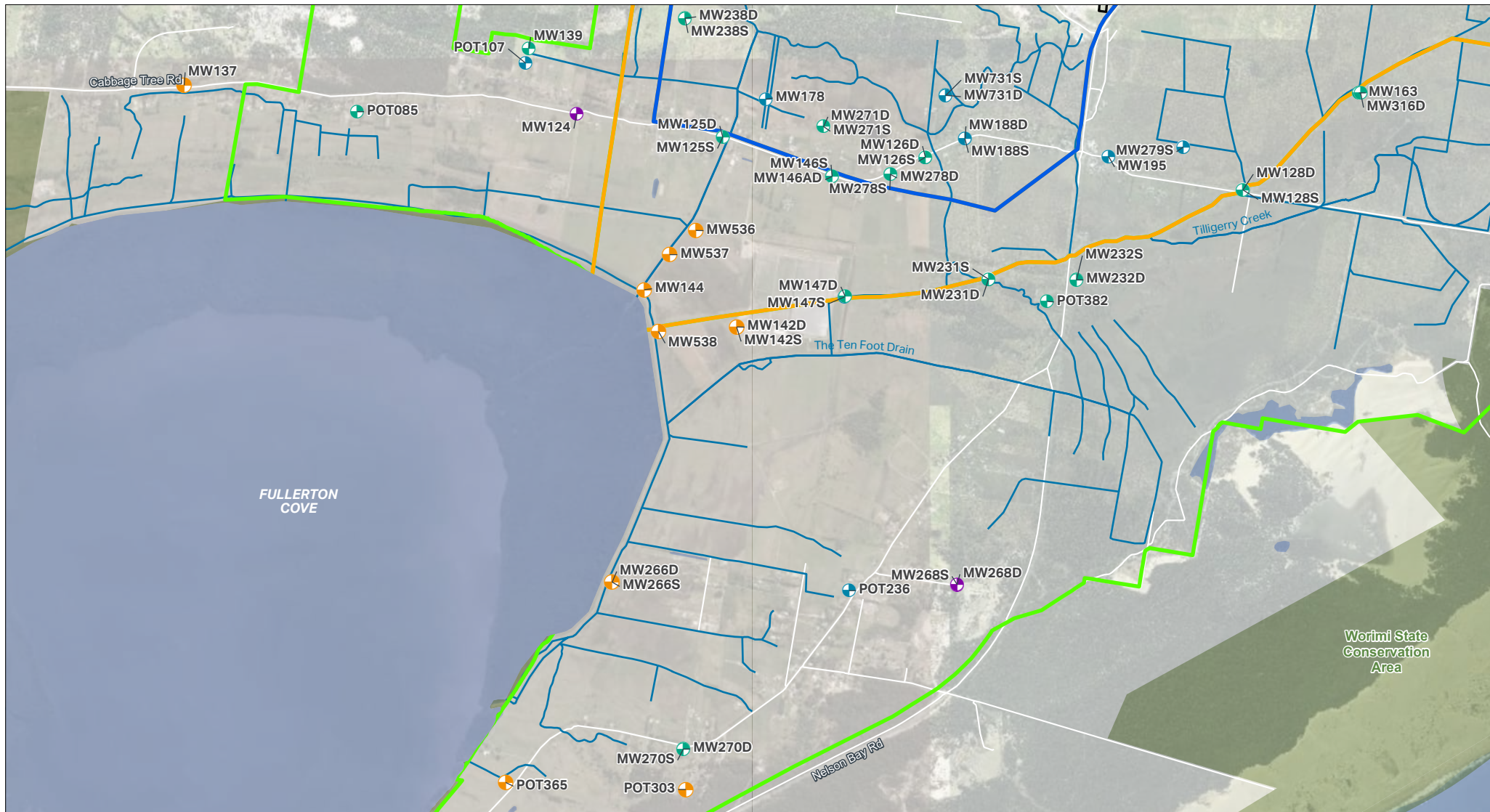


FIGURE F2-4: GROUNDWATER MONITORING LOCATIONS - SOUTH

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- ⊕ Groundwater Sampling Location - OMP - AdHoc (April-June 2025)
- ⊕ Groundwater Sampling Location - OMP - Low Level LOR Analysis
- ⊕ Groundwater Sampling Location - OMP - Standard Level LOR Analysis
- ⊕ Groundwater Sampling Location - OMP - Gauge Only



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FIGURE F3: SURFACE WATER SAMPLING LOCATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- Waterway
- NPWS Reserve
- Surface Water Sampling Location



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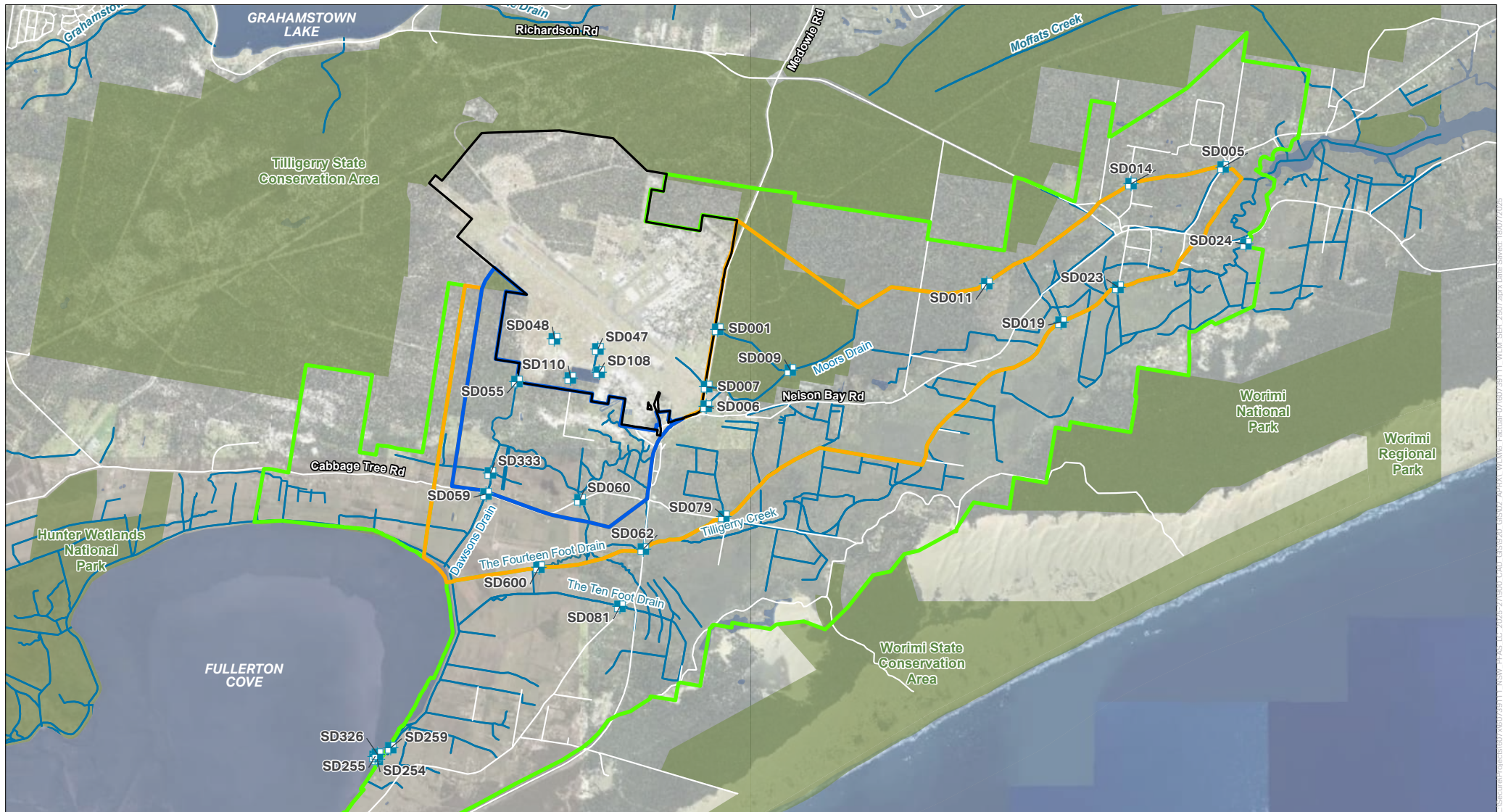


FIGURE F4: SEDIMENT SAMPLING LOCATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- Sediment Sampling Location



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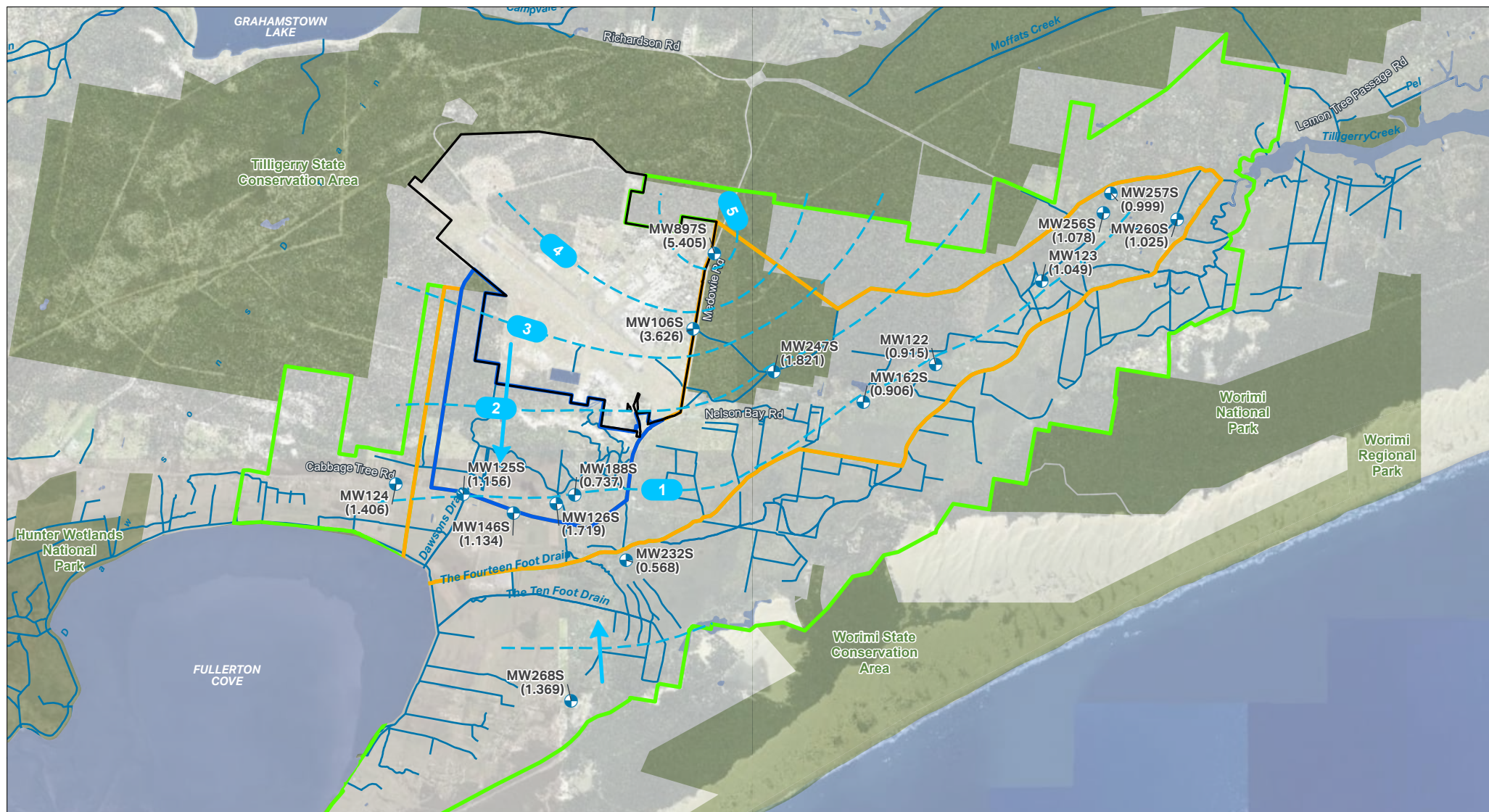


FIGURE F5-1: GROUNDWATER ELEVATION PLAN - SHALLOW

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- Groundwater Elevation Contours (Shallow Wells; m AHD)
- ➔ Inferred Groundwater Flow Direction
- Groundwater Location (gauged)



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REPORT NAME:
Sampling Event Report – April 2025
RAAF Base Williamtown (0908)
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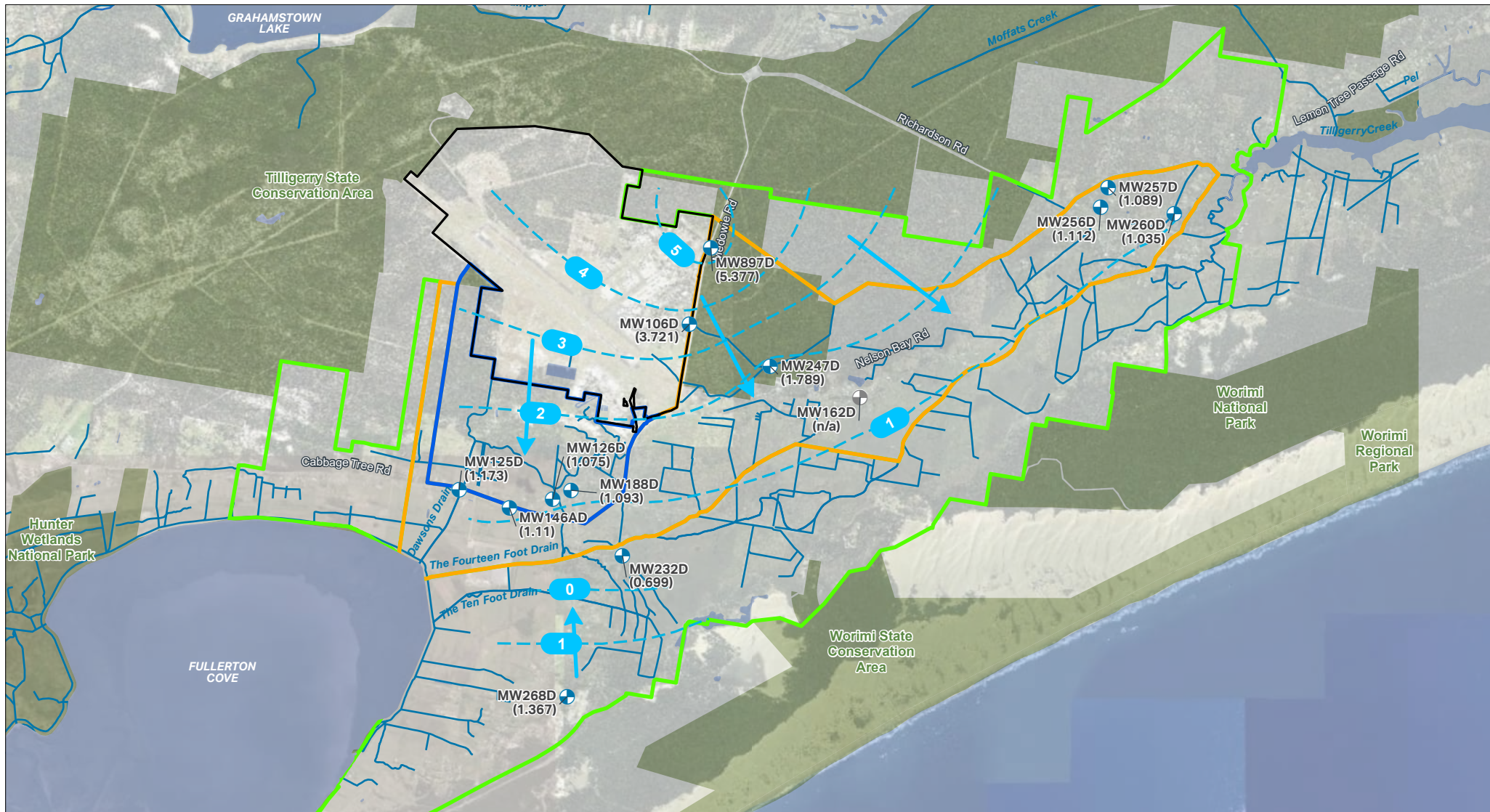


FIGURE F5-2: GROUNDWATER ELEVATION PLAN - DEEP

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- Groundwater Location (gauged)
- Groundwater Location (not gauged)
- ➔ Inferred Groundwater Flow Direction
- Groundwater Elevation Contours (Deep Wells; m AHD)



0 1 2 km

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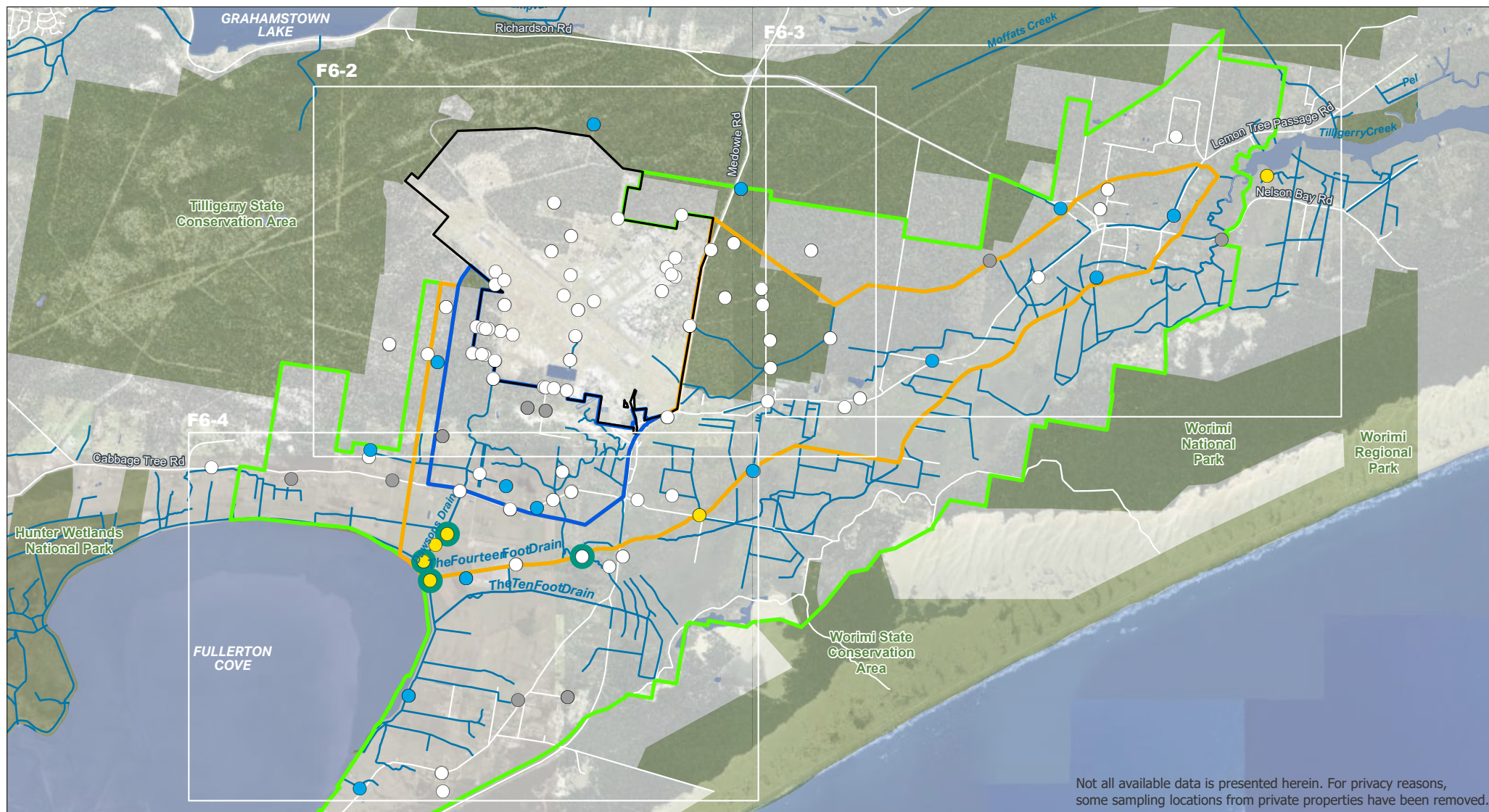


FIGURE F6-1: MONITORING OVERVIEW

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway

- Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and /or PFBS
- Sampled, trigger met for first-time exceedance of drinking water criteria for PFOA, PFOS, PFHxS and/or PFBS
- Sampled, no trigger met

- Sampled, trigger met for first-time exceedance of groundwater EPC
- Not sampled



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FIGURE F6-3: GROUNDWATER MONITORING LOCATIONS - EAST

Legend

-  Active Base Boundary
-  Primary Management Zone
-  Secondary Management Zone
-  Broader Management Zone
-  NPWS Reserve
-  Waterway

- ☒ Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and /or PFBS
- ☒ Sampled, trigger met for first-time exceedance of drinking water criteria for PFOA, PFOS, PFHxS and/or PFBS
- ☐ Sampled, no trigger met

-  Sampled, trigger met for first-time exceedance of groundwater EPC
 Not sampled



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FIGURE F7: SURFACE WATER ANALYTICAL RESULTS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- Waterway
- NPWS Reserve

- Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and/or PFBS
- Sampled, trigger met for first-time exceedance of human health screening criteria for PFOA and/or PFOS + PFHxS
- Sampled, no trigger met

- Sampled, trigger met for first-time exceedance of surface water EPC for 95th percentile
- Not sampled



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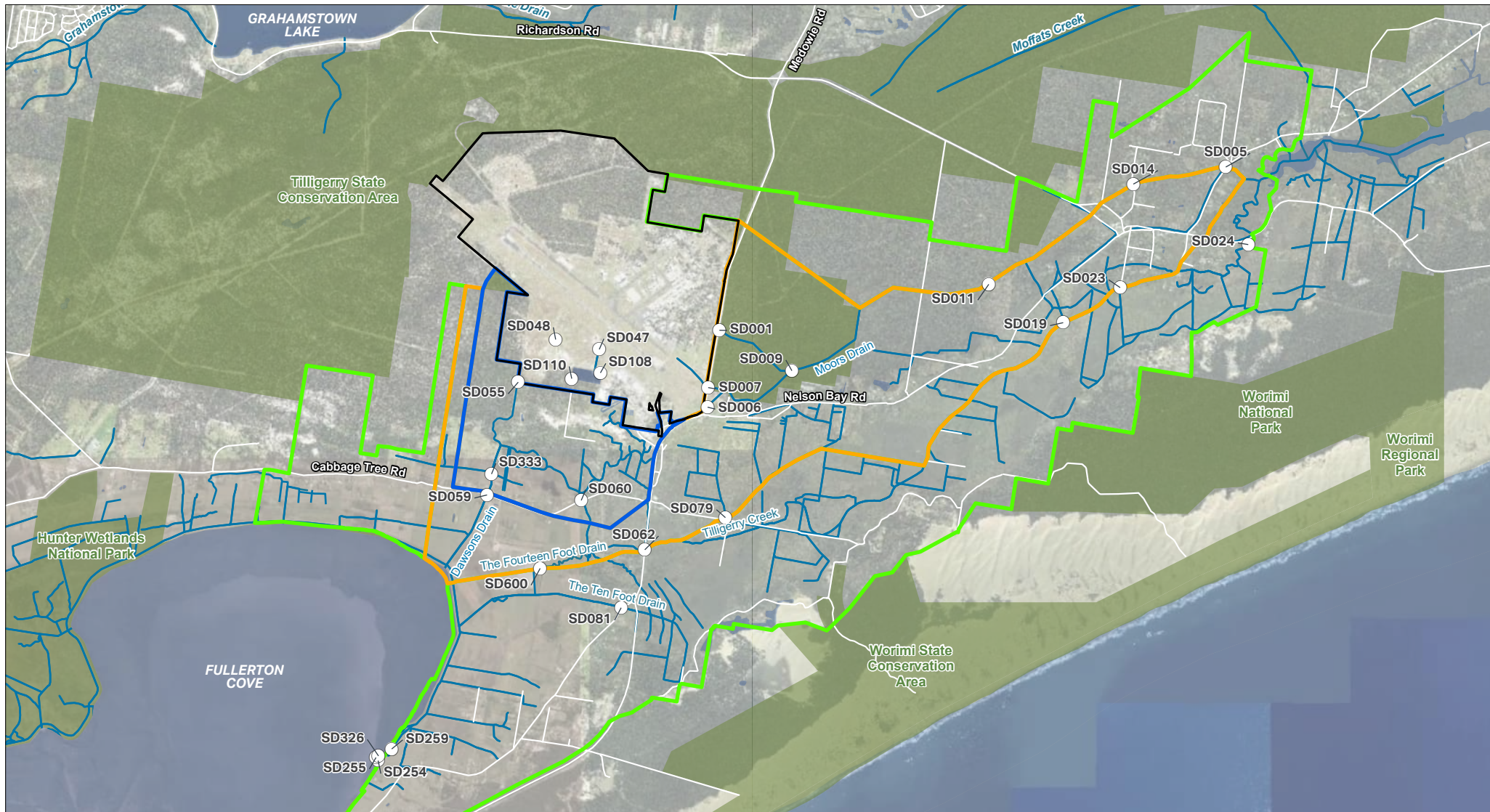


FIGURE F8: SEDIMENT ANALYTICAL RESULTS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway

- Sampled, trigger met for PFAS concentration increase in two consecutive sampling events
- Sampled, no trigger met
- Not sampled



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Appendix B

Tables

Table T1 - Groundwater Gauging and Observations

Location Code	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW104D	3.919	18.5	20	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW104S	3.955	3.5	5	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW106D	4.770	18.5	20	0.0	18.0	1/04/2025 10:39	1.049	3.721	19.52	HydraSleeve install visit. Encountered blockage at 19.5m. Unable to clear. Suspected root intrusion.
MW106D	4.770	18.5	20	0.0	18.0	3/04/2025 16:18	1.076	3.694	19.50	Sampling visit.
MW106S	4.678	3.5	5	0.0	2.9	1/04/2025 10:38	1.052	3.626	3.99	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW106S	4.678	3.5	5	0.0	2.9	3/04/2025 16:25	1.080	3.598	3.98	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW107D	3.362	18.5	20	0.0	18.4	7/04/2025 16:13	0.298	3.064	19.93	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW107D	3.362	18.5	20	0.0	18.4	9/04/2025 15:39	0.284	3.078	19.93	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW107S	3.322	2.0	5	0.0	3.2	7/04/2025 16:11	0.253	3.069	4.76	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW107S	3.322	2.0	5	0.0	3.2	9/04/2025 15:55	0.244	3.078	4.75	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW108D	3.080	18.5	20	0.0	18.0	31/03/2025 15:03	0.035	3.045	19.59	HydraSleeve install visit. Blockage at 19.59m. Unable to clear. Suspected root intrusion. Unable to secure well lid due to PVC/J-cap being too tall.
MW108D	3.080	18.5	20	0.0	18.0	4/04/2025 11:12	0.171	2.909	19.59	Sampling visit. Blockage at 19.59m. Unable to clear. Suspected root intrusion. Unable to secure well lid due to PVC/J-cap being too tall.
MW108S	2.950	2.0	5	0.0	2.9	31/03/2025 15:01	0.000	2.950	4.36	HydraSleeve install visit. Water at TOC. Blockage at 4.36m. Unable to clear. Suspected root intrusion.
MW108S	2.950	2.0	5	0.0	2.9	4/04/2025 11:17	0.142	2.808	4.37	Sampling visit. Blockage at 4.36m. Unable to clear. Suspected root intrusion.
MW109D	3.157	18.5	20	0.0	17.5	1/04/2025 14:43	0.000	3.157	18.98	HydraSleeve install visit. Water above TOC.
MW109D	3.157	18.5	20	0.0	17.5	4/04/2025 11:40	0.020	3.137	18.98	Sampling visit.
MW118	1.674	4.5	6	0.0	4.4	31/03/2025 10:08	0.132	1.542	5.88	HydraSleeve install visit.
MW118	1.674	4.5	6	0.0	4.4	3/04/2025 12:45	0.379	1.295	5.87	Sampling visit.
MW121	1.589	4.5	6	0.8	4.5	31/03/2025 9:56	0.070	1.519	5.98	HydraSleeve install visit.
MW121	1.589	4.5	6	0.8	4.5	3/04/2025 12:00	0.255	1.334	5.98	Sampling visit.
MW122	1.851	5.5	7	0.8	5.5	1/04/2025 11:33	0.936	0.915	6.96	HydraSleeve install visit.
MW122	1.851	5.5	7	0.8	5.5	3/04/2025 12:35	0.990	0.861	6.95	Sampling visit.
MW123	1.524	4.5	6	0.8	4.5	1/04/2025 12:25	0.475	1.049	5.96	HydraSleeve install visit.
MW123	1.524	4.5	6	0.8	4.5	3/04/2025 14:35	0.525	0.999	5.97	Sampling visit.
MW124	2.420	6.0	7.5	0.8	n/a	1/04/2025 9:52	1.014	1.406	7.38	Gauge only.
MW125D	2.173	18.5	20	0.0	18.7	1/04/2025 9:44	1.000	1.173	20.23	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW125D	2.173	18.5	20	0.0	18.7	3/04/2025 10:25	1.030	1.143	20.23	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW125S	2.197	6.0	7.5	0.0	6.4	1/04/2025 9:45	1.041	1.156	7.46	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW125S	2.197	6.0	7.5	0.0	6.4	3/04/2025 10:21	1.064	1.133	7.47	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW126D	1.794	18.5	20	0.0	18.8	1/04/2025 9:15	0.719	1.075	20.32	HydraSleeve install visit.
MW126D	1.794	18.5	20	0.0	18.8	3/04/2025 9:34	0.748	1.046	20.32	Sampling visit.
MW126S	1.790	5.5	7	0.0	5.1	1/04/2025 9:13	0.071	1.719	6.61	HydraSleeve install visit.
MW126S	1.790	5.5	7	0.0	5.1	3/04/2025 9:31	0.740	1.050	6.59	Sampling visit. Lugs rusted.
MW128D	0.843	9.3	10.3	0.0	8.9	8/04/2025 12:28	0.230	0.613	10.44	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW128D	0.843	9.3	10.3	0.0	8.9	9/04/2025 13:00	0.232	0.611	10.43	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW128S	0.909	4.7	6.2	0.0	5.1	8/04/2025 12:33	0.940	-0.031	6.16	HydraSleeve install visit.
MW128S	0.909	4.7	6.2	0.0	5.1	9/04/2025 13:08	0.947	-0.038	6.17	Sampling visit.
MW130D	5.858	15.0	16.5	0.0	15.0	7/04/2025 10:20	0.701	5.157	16.56	HydraSleeve install visit.
MW130D	5.858	15.0	16.5	0.0	15.0	10/04/2025 9:43	0.735	5.123	16.46	Sampling visit.
MW130S	5.794	1.0	4	0.0	2.3	7/04/2025 10:15	0.642	5.152	3.84	HydraSleeve install visit.
MW130S	5.794	1.0	4	0.0	2.3	10/04/2025 9:49	0.672	5.122	3.83	Sampling visit.
MW132D	6.138	15.0	16.5	0.0	14.6	7/04/2025 11:20	2.586	3.552	16.10	HydraSleeve install visit.
MW132D	6.138	15.0	16.5	0.0	14.6	10/04/2025 10:16	2.590	3.548	16.09	Sampling visit.
MW132I	6.164	8.4	9.9	0.0	8.7	7/04/2025 11:25	2.583	3.581	9.79	HydraSleeve install visit. Lugs rusted.
MW132I	6.164	8.4	9.9	0.0	8.7	10/04/2025 10:24	2.593	3.571	9.76	Sampling visit. Lugs rusted.
MW134D	8.750	18.5	20	0.0	18.4	8/04/2025 10:03	1.992	6.758	19.92	HydraSleeve install visit. Well damaged, Gatic and PVC cracked.
MW134D	8.750	18.5	20	0.0	18.4	11/04/2025 9:23	2.035	6.715	19.91	Sampling visit. Well damaged, Gatic and PVC cracked.
MW134I	8.710	10.0	11.5	0.0	9.9	8/04/2025 10:05	1.951	6.759	11.48	HydraSleeve install visit.
MW134I	8.710	10.0	11.5	0.0	9.9	11/04/2025 9:31	1.982	6.728	11.48	Sampling visit.
MW137	2.820	0.5	3.5	0.0	1.9	8/04/2025 13:35	0.802	2.018	3.45	HydraSleeve install.
MW137	2.820	0.5	3.5	0.0	1.9	9/04/2025 14:26	0.812	2.008	3.43	Sampling visit.
MW139	1.986	1.0	4	0.0	2.4	14/04/2025 9:48	0.389	1.597	3.92	HydraSleeve install visit.
MW139	1.986	1.0	4	0.0	2.4	14/04/2025 13:54	0.392	1.594	3.92	Sampling visit.
MW142D	1.230	18.5	20	0.0	n/a	26/05/2025 9:00	-	n/a	-	Unable to access due to floodwaters.
MW142D	1.230	18.5	20	0.0	19.5	10/06/2025 10:19	0.412	0.818	21.200	HydraSleeve install visit.
MW142D	1.230	18.5	20	0.0	19.5	10/06/2025 14:41	0.431	0.799	21.020	Sampling visit.
MW142S	1.230	0.8	3.8	0.0	n/a	26/05/2025 9:00	-	n/a	-	Unable to access due to floodwaters.
MW142S	1.230	0.8	3.8	0.0	3.2	10/06/2025 10:21	0.927	0.303	4.730	HydraSleeve install visit.
MW142S	1.230	0.8	3.8	0.0	3.2	10/06/2025 14:34	0.964	0.266	4.720	Sampling visit.
MW144	1.923	1.0	4	0.0	3.4	26/05/2025 13:07	1.015	0.908	4.940	HydraSleeve install visit.
MW144	1.923	1.0	4	0.0	3.4	27/05/2025 9:25	1.030	0.893	4.935	Sampling visit.
MW146AD	1.620	18.5	20	0.0	18.5	1/04/2025 9:31	0.510	1.110	20.07	HydraSleeve install visit.
MW146AD	1.620	18.5	20	0.0	18.5	3/04/2025 10:06	0.558	1.062	20.07	Sampling visit.
MW146S	1.802	0.8	3.8	0.0	2.2	1/04/2025 9:30	0.668	1.134	3.78	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall

Table T1 - Groundwater Gauging and Observations

Location Code	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW146S	1.802	0.8	3.8	0.0	2.2	3/04/2025 10:02	0.700	1.102	3.78	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW147D	0.810	23.7	26.7	0.0	25.2	10/04/2025 13:34	0.285	0.525	26.76	HydraSleeve install visit.
MW147D	0.810	23.7	26.7	0.0	25.2	11/04/2025 11:38	0.286	0.524	26.76	Sampling visit.
MW147S	0.710	1.0	4	0.0	2.7	10/04/2025 13:35	0.715	-0.005	4.20	HydraSleeve install visit.
MW147S	0.710	1.0	4	0.0	2.7	11/04/2025 11:43	0.743	-0.033	4.20	Sampling visit.
MW150D	2.143	18.5	20	0.0	18.7	31/03/2025 9:44	0.491	1.652	20.26	HydraSleeve install visit.
MW150D	2.143	18.5	20	0.0	18.7	3/04/2025 16:42	0.550	1.593	20.25	Sampling visit.
MW150S	2.111	0.6	3.6	0.0	2.0	31/03/2025 9:35	0.365	1.746	3.55	HydraSleeve install visit.
MW150S	2.111	0.6	3.6	0.0	2.0	3/04/2025 16:39	0.399	1.712	3.61	Sampling visit.
MW155	7.960	1.5	3.8	0.0	2.3	31/03/2025 13:19	0.860	7.100	3.80	HydraSleeve install visit.
MW155	7.960	1.5	3.8	0.0	2.3	4/04/2025 9:20	0.969	6.991	3.81	Sampling visit.
MW159D	5.260	18.5	20	0.9	19.7	7/04/2025 12:29	1.771	3.489	21.25	HydraSleeve install visit.
MW159D	5.260	18.5	20	0.9	19.7	10/04/2025 11:25	1.823	3.437	21.25	Sampling visit.
MW159S	4.987	0.7	3.7	0.8	2.9	7/04/2025 12:31	1.520	3.467	4.49	HydraSleeve install visit.
MW159S	4.987	0.7	3.7	0.8	2.9	10/04/2025 11:30	1.565	3.422	4.50	Sampling visit.
MW160	4.212	1.0	4	0.0	2.6	7/04/2025 11:40	1.337	2.875	4.10	HydraSleeve install visit.
MW160	4.212	1.0	4	0.0	2.6	10/04/2025 10:43	1.362	2.850	4.03	Sampling visit.
MW161D	2.057	18.8	20.3	0.0	18.8	7/04/2025 13:20	0.571	1.486	20.25	HydraSleeve install visit.
MW161D	2.057	18.8	20.3	0.0	18.8	10/04/2025 12:30	0.596	1.461	20.28	Sampling visit.
MW161S	2.052	1.0	4	0.0	2.5	7/04/2025 13:31	0.576	1.476	4.03	HydraSleeve install visit.
MW161S	2.052	1.0	4	0.0	2.5	10/04/2025 12:40	0.600	1.452	4.02	Sampling visit.
MW162D	2.876	18.6	20.1	0.0	n/a	1/04/2025 11:15	-	n/a	-	Unable to access due to jcap being jammed under well casing.
MW162D	2.876	18.6	20.1	0.0	18.6	26/05/2025 15:00	0.872	2.004	20.150	HydraSleeve install visit.
MW162D	2.876	18.6	20.1	0.0	18.6	27/05/2025 11:13	0.907	1.969	20.140	Sampling visit.
MW162S	2.838	1.5	4.5	0.0	2.7	1/04/2025 11:17	1.932	0.906	4.22	HydraSleeve install visit. Lugs rusted.
MW162S	2.838	1.5	4.5	0.0	2.7	3/04/2025 12:25	1.911	0.927	4.22	Sampling visit. Lugs rusted.
MW163	1.207	0.5	3.5	0.7	2.5	8/04/2025 12:46	0.888	0.319	4.09	HydraSleeve install visit.
MW163	1.207	0.5	3.5	0.7	2.5	9/04/2025 12:35	0.900	0.307	4.09	Sampling visit.
MW165	1.408	2.5	5	0.0	n/a	9/04/2025 8:30	-	n/a	-	Unable to locate - lost in overgrown grass.
MW165	1.408	2.5	5	0.0	n/a	27/05/2025 12:06	-	n/a	-	Unable to locate - suspected destroyed.
MW166	7.100	0.8	3.8	0.0	2.1	1/04/2025 14:01	1.028	6.072	3.67	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW166	7.100	0.8	3.8	0.0	2.1	4/04/2025 10:10	1.000	6.100	3.66	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW167	7.190	0.7	3.7	0.6	2.8	1/04/2025 14:06	1.989	5.201	4.30	HydraSleeve install visit.
MW167	7.190	0.7	3.7	0.6	2.8	4/04/2025 10:18	1.924	5.266	4.31	Sampling visit.
MW168	6.780	0.7	3.7	0.0	1.9	1/04/2025 14:12	1.125	5.655	3.44	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW168	6.780	0.7	3.7	0.0	1.9	4/04/2025 10:27	1.100	5.680	3.44	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW169D	5.800	18.0	19.5	0.0	17.8	1/04/2025 14:23	0.600	5.200	19.29	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW169D	5.800	18.0	19.5	0.0	17.8	4/04/2025 10:40	0.645	5.155	19.30	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW169S	5.830	0.7	3.7	0.0	2.2	1/04/2025 14:18	0.572	5.258	3.71	HydraSleeve install visit. Lugs rusted, unable to replace missing bolts.
MW169S	5.830	0.7	3.7	0.0	2.2	4/04/2025 10:40	0.670	5.160	3.71	Sampling visit. Lugs rusted, unable to replace missing bolts.
MW171D	4.970	18.8	20.3	0.0	18.7	31/03/2025 14:33	0.250	4.720	20.28	HydraSleeve install visit.
MW171D	4.970	18.8	20.3	0.0	18.7	4/04/2025 10:55	0.435	4.535	20.29	Sampling visit.
MW171S	5.020	0.7	3.7	0.0	2.1	31/03/2025 14:24	0.290	4.730	3.67	HydraSleeve install visit. Data logger removed.
MW171S	5.020	0.7	3.7	0.0	2.1	4/04/2025 11:00	0.490	4.530	3.67	Sampling visit.
MW172	4.880	0.7	3.7	0.0	1.8	31/03/2025 14:39	0.050	4.830	3.36	HydraSleeve install visit. Data logger removed. Blockage at 3.36m. Unable to clear. Suspected root intrusion.
MW172	4.880	0.7	3.7	0.0	1.8	1/04/2025 14:32	0.120	4.760	3.34	Sampling visit. Blockage at 3.36m. Unable to clear. Suspected root intrusion.
MW175D	4.110	19.5	21	0.6	20.0	31/03/2025 15:28	0.910	3.200	21.50	HydraSleeve install visit. Data logger removed.
MW175D	4.110	19.5	21	0.6	20.0	4/04/2025 11:28	1.054	3.056	21.51	Sampling visit.
MW178	1.760	1.2	4.2	0.0	2.7	1/04/2025 15:23	0.622	1.138	4.23	HydraSleeve install visit.
MW178	1.760	1.2	4.2	0.0	2.7	3/04/2025 10:38	0.608	1.152	4.23	Sampling visit.
MW179D	4.760	18.5	20	0.0	18.0	31/03/2025 13:56	0.780	3.980	19.51	HydraSleeve install visit. Hitting blockage/obstruction at 19.51m. Unable to clear. Suspected root intrusion.
MW179D	4.760	18.5	20	0.0	18.0	1/04/2025 13:41	0.791	3.969	19.50	Sampling visit. Hitting blockage/obstruction at 19.51m. Unable to clear. Suspected root intrusion.
MW179S	4.710	0.8	3.8	0.0	2.2	31/03/2025 14:01	0.766	3.944	3.79	HydraSleeve install visit.
MW179S	4.710	0.8	3.8	0.0	2.2	1/04/2025 13:45	0.790	3.920	3.67	Sampling visit.
MW184D	3.073	18.5	20	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW184S	3.106	1.0	4	0.0	n/a	17/04/2025 9:30	-	n/a	-	Unable to locate - assumed destroyed under construction.
MW188D	1.354	18.5	20	0.0	18.4	1/04/2025 10:04	0.261	1.093	19.94	HydraSleeve install visit.
MW188D	1.354	18.5	20	0.0	18.4	3/04/2025 9:21	0.260	1.094	19.96	Sampling visit.
MW188S	1.439	0.8	3.8	0.0	2.3	1/04/2025 10:02	0.702	0.737	3.81	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW188S	1.439	0.8	3.8	0.0	2.3	3/04/2025 9:16	0.725	0.714	3.81	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW195	1.050	0.8	3.8	0.0	2.3	31/03/2025 10:40	0.020	1.030	3.82	HydraSleeve install visit.
MW195	1.050	0.8	3.8	0.0	2.3	3/04/2025 10:50	0.030	1.020	3.82	Sampling visit.
MW196	6.760	0.8	3.8	0.0	2.3	8/04/2025 8:55	0.879	5.881	3.83	HydraSleeve install visit.
MW196	6.760	0.8	3.8	0.0	2.3	11/04/2025 8:34	0.903	5.857	3.83	Sampling visit.
MW198	6.110	0.8	3.8	0.0	2.3	8/04/2025 9:07	1.075	5.035	3.81	HydraSleeve install visit.
MW198	6.110	0.8	3.8	0.0	2.3	11/04/2025 8:44	1.104	5.006	3.86	Sampling visit.

Table T1 - Groundwater Gauging and Observations

Location Code	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW200	6.470	1.0	4	0.0	2.1	8/04/2025 8:43	1.024	5.446	3.66	HydraSleeve install visit.
MW200	6.470	1.0	4	0.0	2.1	11/04/2025 8:24	1.164	5.306	3.60	Sampling visit.
MW201D	5.810	18.1	19.6	0.0	17.9	8/04/2025 8:28	0.856	4.954	19.42	HydraSleeve install visit.
MW201D	5.810	18.1	19.6	0.0	17.9	11/04/2025 8:14	0.902	4.908	19.41	Sampling visit.
MW201S	5.800	1.0	4	0.0	2.5	8/04/2025 8:33	0.834	4.966	4.03	HydraSleeve install visit.
MW201S	5.800	1.0	4	0.0	2.5	11/04/2025 8:05	0.876	4.924	4.03	Sampling visit.
MW202D	5.170	19.5	21	0.0	19.2	31/03/2025 13:49	0.625	4.545	20.76	HydraSleeve install visit.
MW202D	5.170	19.5	21	0.0	19.2	1/04/2025 13:15	0.726	4.444	20.73	Sampling visit.
MW202S	5.210	0.8	3.8	0.0	2.1	31/03/2025 13:45	0.670	4.540	3.69	HydraSleeve install visit.
MW202S	5.210	0.8	3.8	0.0	2.1	1/04/2025 13:31	0.760	4.450	3.68	Sampling visit.
MW208	6.990	1.2	4.2	0.0	2.6	31/03/2025 12:16	1.940	5.050	4.11	HydraSleeve install visit.
MW208	6.990	1.2	4.2	0.0	2.6	4/04/2025 9:05	1.942	5.048	4.11	Sampling visit.
MW210D	7.350	18.5	20	0.0	18.5	31/03/2025 13:08	2.775	4.575	20.07	HydraSleeve install visit.
MW210D	7.350	18.5	20	0.0	18.5	4/04/2025 9:30	2.740	4.610	20.09	Sampling visit.
MW210S	7.220	2.0	5	0.0	3.2	31/03/2025 13:04	2.650	4.570	4.75	HydraSleeve install visit.
MW210S	7.220	2.0	5	0.0	3.2	4/04/2025 9:36	2.605	4.615	4.75	Sampling visit.
MW230S	0.939	2.5	4	0.0	2.5	14/04/2025 12:40	0.084	0.855	4.03	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW230S	0.939	2.5	4	0.0	2.5	15/04/2025 8:50	0.162	0.777	4.02	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW231D	0.571	16.0	17.5	0.0	16.0	16/04/2025 10:30	0.000	0.571	17.59	HydraSleeve install visit. Water at TOC.
MW231D	0.571	16.0	17.5	0.0	16.0	17/04/2025 12:23	0.000	0.571	17.60	Sampling visit. Water at TOC
MW231S	0.625	1.0	4	0.0	2.5	16/04/2025 10:37	0.574	0.051	4.01	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW231S	0.625	1.0	4	0.0	2.5	17/04/2025 12:29	0.308	0.317	4.01	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW232D	1.324	18.5	20	0.7	19.5	1/04/2025 8:52	0.625	0.699	21.04	HydraSleeve install visit. Hinge on well monument lid broken.
MW232D	1.324	18.5	20	0.7	19.5	3/04/2025 8:58	0.634	0.690	21.04	Sampling visit. Hinge on well monument lid broken.
MW232S	1.148	1.0	4	0.5	3.1	1/04/2025 8:51	0.580	0.568	4.60	HydraSleeve install visit.
MW232S	1.148	1.0	4	0.5	3.1	3/04/2025 8:54	0.595	0.553	4.60	Sampling visit.
MW238D	2.211	18.5	20	0.0	n/a	15/04/2025 12:00	-	n/a	-	Unable to access - private property access not confirmed.
MW238S	2.270	1.0	4	0.0	n/a	15/04/2025 12:00	-	n/a	-	Unable to access - private property access not confirmed.
MW240D	5.742	18.5	20	0.0	18.8	15/04/2025 12:12	1.304	4.438	20.30	HydraSleeve install visit.
MW240D	5.742	18.5	20	0.0	18.8	16/04/2025 13:47	1.310	4.432	20.30	Sampling visit.
MW241D	5.449	18.5	20	0.0	18.8	7/04/2025 15:44	1.350	4.099	20.30	HydraSleeve install visit.
MW241D	5.449	18.5	20	0.0	18.8	9/04/2025 16:28	1.377	4.072	20.21	Sampling visit.
MW241S	5.559	1.0	4	0.0	2.4	7/04/2025 15:43	1.399	4.160	3.95	HydraSleeve install visit.
MW241S	5.559	1.0	4	0.0	2.4	9/04/2025 16:21	1.344	4.215	3.98	Sampling visit.
MW245D	9.311	18.5	20	0.9	19.6	8/04/2025 10:30	1.513	7.798	21.19	HydraSleeve install visit.
MW245D	9.311	18.5	20	0.9	19.6	11/04/2025 10:00	1.544	7.767	21.20	Sampling visit.
MW245S	9.292	1.0	4	0.8	3.3	8/04/2025 10:30	1.453	7.839	4.87	HydraSleeve install visit.
MW245S	9.292	1.0	4	0.8	3.3	11/04/2025 9:56	1.486	7.806	4.87	Sampling visit.
MW247D	2.529	18.5	20	0.0	18.8	1/04/2025 11:06	0.740	1.789	20.31	HydraSleeve install visit.
MW247D	2.529	18.5	20	0.0	18.8	3/04/2025 12:13	0.800	1.729	20.31	Sampling visit.
MW247S	2.468	1.0	4	0.0	2.3	1/04/2025 11:05	0.647	1.821	3.87	HydraSleeve install visit.
MW247S	2.468	1.0	4	0.0	2.3	3/04/2025 12:10	0.709	1.759	3.85	Sampling visit.
MW252S	1.103	1.0	4	0.0	n/a	7/04/2025 15:03	-	n/a	-	Unable to access - due to well being under flood water.
MW252S	1.103	1.0	4	0.0	n/a	26/05/2025 12:06	-	n/a	-	Unable to access due to floodwaters.
MW255D	1.260	18.5	20	0.0	18.7	31/03/2025 10:22	0.439	0.821	20.26	HydraSleeve install visit.
MW255D	1.260	18.5	20	0.0	18.7	3/04/2025 14:15	0.590	0.670	20.26	Sampling visit.
MW255S	1.258	1.0	4	0.0	2.4	31/03/2025 10:29	0.520	0.738	3.96	HydraSleeve install visit. Data logger removed at 10:28, replaced at 10:31
MW255S	1.258	1.0	4	0.0	2.4	3/04/2025 14:22	0.682	0.576	3.96	Sampling visit.
MW256D	1.534	18.5	20	0.0	18.7	1/04/2025 11:46	0.422	1.112	20.25	HydraSleeve install visit.
MW256D	1.534	18.5	20	0.0	18.7	3/04/2025 12:57	0.464	1.070	20.28	Sampling visit.
MW256S	1.518	1.0	4	0.0	2.4	1/04/2025 11:45	0.440	1.078	3.99	HydraSleeve install visit.
MW256S	1.518	1.0	4	0.0	2.4	3/04/2025 13:00	0.483	1.035	3.99	Sampling visit.
MW257D	1.819	18.5	20	0.0	18.6	1/04/2025 11:56	0.730	1.089	20.19	HydraSleeve install visit.
MW257D	1.819	18.5	20	0.0	18.6	3/04/2025 13:14	0.815	1.004	20.19	Sampling visit.
MW257S	1.639	1.0	4	0.0	2.2	1/04/2025 11:55	0.640	0.999	3.77	HydraSleeve install visit.
MW257S	1.639	1.0	4	0.0	2.2	3/04/2025 13:10	0.722	0.917	3.76	Sampling visit.
MW260D	2.080	18.5	20	0.0	18.7	1/04/2025 12:11	1.045	1.035	20.24	HydraSleeve install visit.
MW260D	2.080	18.5	20	0.0	18.7	3/04/2025 13:55	1.105	0.975	20.23	Sampling visit.
MW260S	2.124	1.0	4	0.0	2.2	1/04/2025 12:12	1.099	1.025	3.79	HydraSleeve install visit.
MW260S	2.124	1.0	4	0.0	2.2	3/04/2025 13:52	1.110	1.014	3.79	Sampling visit.
MW262D	Unknown	18.5	20	0.0	19.3	26/05/2025 14:35	0.268	n/a	20.287	HydraSleeve install visit.
MW262D	Unknown	18.5	20	0.0	n/a	27/05/2025 12:15	-	n/a	-	Unable to access - wells under water from high tide.
MW262D	Unknown	18.5	20	0.0	19.3	10/06/2025 13:49	0.307	n/a	20.280	Sampling visit.
MW262S	Unknown	3.0	5	0.0	2.9	26/05/2025 14:43	0.287	n/a	4.430	HydraSleeve install visit.
MW262S	Unknown	3.0	5	0.0	n/a	27/05/2025 12:15	-	n/a	-	Unable to access - wells under water from high tide.
MW262S	Unknown	3.0	5	0.0	2.9	10/06/2025 14:03	0.376	n/a	4.415	Sampling visit.

Table T1 - Groundwater Gauging and Observations

Location Code	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW264D	9.347	18.5	20	0.0	18.5	9/04/2025 9:39	0.684	8.663	20.07	HydraSleeve install visit.
MW264D	9.347	18.5	20	0.0	18.5	10/04/2025 8:49	0.692	8.655	20.07	Sampling visit.
MW264S	9.492	1.0	4	0.0	1.7	9/04/2025 9:42	0.840	8.652	3.20	HydraSleeve install visit. Encountered blockage at 3.2m. Unable to clear. Suspected root intrusion.
MW264S	9.492	1.0	4	0.0	1.7	10/04/2025 8:54	0.855	8.637	3.22	Sampling visit. Encountered blockage at 3.2m. Unable to clear. Suspected root intrusion.
MW266D	0.267	18.5	20	0.0	n/a	15/04/2025 10:19	-	n/a	-	Unable to access - one bolt rusted/seized..
MW266S	0.229	1.0	4	0.0	2.4	15/04/2025 10:22	0.031	0.198	3.99	HydraSleeve install.
MW266S	0.229	1.0	4	0.0	2.4	15/04/2025 14:35	0.000	0.229	3.99	Water at TOC
MW268D	3.362	18.5	20	0.0	n/a	1/04/2025 8:34	1.995	1.367	20.10	Gauge only.
MW268S	3.232	2.0	5	0.0	n/a	1/04/2025 8:35	1.863	1.369	5.01	Gauge only. Data logger removed
MW270D	1.412	18.5	20	0.0	18.8	15/04/2025 9:43	0.520	0.892	20.32	HydraSleeve install visit.
MW270D	1.412	18.5	20	0.0	18.8	15/04/2025 14:10	0.520	0.892	20.31	Sampling visit.
MW270S	1.411	2.0	4	0.0	2.3	15/04/2025 9:46	0.504	0.907	3.82	HydraSleeve install visit.
MW270S	1.411	2.0	4	0.0	2.3	15/04/2025 14:16	0.518	0.893	3.83	Sampling visit.
MW271D	1.308	18.5	20	0.0	19.0	14/04/2025 10:04	0.271	1.037	20.53	HydraSleeve install visit.
MW271D	1.308	18.5	20	0.0	19.0	14/04/2025 14:06	0.270	1.038	20.52	Sampling visit.
MW271S	1.316	1.0	4	0.0	2.5	14/04/2025 10:07	0.279	1.037	4.00	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW271S	1.316	1.0	4	0.0	2.5	14/04/2025 14:10	0.285	1.031	4.00	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW278D	1.289	18.5	20	0.0	18.7	31/03/2025 11:08	0.148	1.141	20.25	HydraSleeve install visit.
MW278D	1.289	18.5	20	0.0	18.7	3/04/2025 9:45	0.269	1.020	20.26	Sampling visit.
MW278S	1.253	1.5	3	0.0	1.5	31/03/2025 11:15	0.070	1.183	3.00	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW278S	1.253	1.5	3	0.0	1.5	3/04/2025 9:51	0.162	1.091	3.02	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW279S	1.295	0.8	3.8	0.8	3.1	8/04/2025 12:00	0.708	0.587	4.60	HydraSleeve install visit.
MW279S	1.295	0.8	3.8	0.8	3.1	9/04/2025 12:05	0.725	0.570	4.62	Sampling visit.
MW280S	3.831	1.0	4	0.0	2.3	8/04/2025 14:28	0.387	3.444	3.87	HydraSleeve install visit. Missing bolts, unable to replace due to non-standard bolt size.
MW280S	3.831	1.0	4	0.0	2.3	9/04/2025 16:00	0.401	3.430	3.84	Sampling visit. Missing bolts, unable to replace due to non-standard bolt size.
MW281S	5.290	1.0	4	0.0	2.4	15/04/2025 12:33	0.975	4.315	3.99	HydraSleeve install visit. Unable to secure well lid due to PVC/J-cap being too tall
MW281S	5.290	1.0	4	0.0	2.4	16/04/2025 14:03	0.973	4.317	4.00	Sampling visit. Unable to secure well lid due to PVC/J-cap being too tall
MW282S	5.370	1.0	4	0.0	2.0	15/04/2025 12:18	0.881	4.489	3.52	HydraSleeve install visit.
MW282S	5.370	1.0	4	0.0	2.0	16/04/2025 13:54	0.871	4.499	3.46	Sampling visit.
MW304	8.290	0.6	5.5	0.7	3.9	31/03/2025 12:00	3.590	4.700	5.40	HydraSleeve install visit.
MW304	8.290	0.6	5.5	0.7	3.9	4/04/2025 8:46	3.650	4.640	5.41	Sampling visit.
MW315D	6.160	18.5	20	0.0	18.9	8/04/2025 14:55	1.000	5.160	20.44	HydraSleeve install visit.
MW315D	6.160	18.5	20	0.0	18.9	9/04/2025 15:03	1.000	5.160	20.40	Sampling visit.
MW315S	6.180	1.0	4	0.0	2.2	8/04/2025 14:56	1.032	5.148	3.75	HydraSleeve install visit.
MW315S	6.180	1.0	4	0.0	2.2	9/04/2025 15:08	1.038	5.142	3.77	Sampling visit.
MW316D	1.200	18.5	20	0.0	19.5	8/04/2025 12:48	0.743	0.457	21.09	HydraSleeve install visit.
MW316D	1.200	18.5	20	0.0	19.5	9/04/2025 12:49	0.900	0.300	21.09	Sampling visit.
MW317D	7.960	18.5	20	0.0	19.0	8/04/2025 10:17	0.906	7.054	20.50	HydraSleeve install visit.
MW317D	7.960	18.5	20	0.0	19.0	11/04/2025 9:48	0.934	7.026	20.53	Sampling visit.
MW317S	7.970	1.0	4	0.0	2.6	8/04/2025 10:17	0.927	7.043	4.11	HydraSleeve install visit.
MW317S	7.970	1.0	4	0.0	2.6	11/04/2025 9:41	0.962	7.008	4.10	Sampling visit.
MW318D	2.630	18.5	20	0.0	18.8	7/04/2025 12:05	0.582	2.048	20.36	HydraSleeve install visit.
MW318D	2.630	18.5	20	0.0	18.8	10/04/2025 11:10	0.619	2.011	20.30	Sampling visit.
MW318S	2.670	1.0	4	0.0	2.3	7/04/2025 12:07	0.635	2.035	3.89	HydraSleeve install visit.
MW318S	2.670	1.0	4	0.0	2.3	10/04/2025 11:05	0.674	1.996	3.89	Sampling visit.
MW329	6.122	2.4	5.4	0.0	4.6	15/04/2025 12:27	1.723	4.399	6.15	HydraSleeve install visit.
MW329	6.122	2.4	5.4	0.0	4.6	16/04/2025 13:59	1.719	4.403	6.17	Sampling visit.
MW340D	4.955	17.0	20	0.9	19.7	15/04/2025 13:15	1.471	3.484	21.25	HydraSleeve install visit.
MW340D	4.955	17.0	20	0.9	19.7	16/04/2025 14:44	1.510	3.445	21.24	Sampling visit.
MW340S	4.962	2.0	5	0.9	4.2	15/04/2025 13:14	1.502	3.460	5.72	HydraSleeve install visit.
MW340S	4.962	2.0	5	0.9	4.2	16/04/2025 14:39	1.532	3.430	5.72	Sampling visit.
MW342D	4.764	17.0	20	0.8	19.7	15/04/2025 12:57	1.258	3.506	21.23	HydraSleeve install visit.
MW342D	4.764	17.0	20	0.8	19.7	16/04/2025 14:21	1.280	3.484	21.24	Sampling visit.
MW344D	4.521	17.0	20	0.9	18.4	15/04/2025 12:46	1.095	3.426	19.98	HydraSleeve install visit.
MW344D	4.521	17.0	20	0.9	18.4	16/04/2025 14:11	1.128	3.393	19.97	Sampling visit.
MW344S	4.777	2.0	5	1.0	4.2	15/04/2025 12:48	1.369	3.408	5.77	HydraSleeve install visit.
MW344S	4.777	2.0	5	1.0	4.2	16/04/2025 14:16	1.393	3.384	5.77	Sampling visit.
MW354S	4.993	2.0	5	1.0	4.3	15/04/2025 13:03	1.480	3.513	5.86	HydraSleeve install visit.
MW354S	4.993	2.0	5	1.0	4.3	16/04/2025 14:30	1.552	3.441	5.86	Sampling visit.
MW406	8.270	Unknown	Unknown	0.5	1.4	31/03/2025 11:39	1.589	6.681	2.98	HydraSleeve install visit.
MW406	8.270	Unknown	Unknown			3/04/2025 15:40	-	n/a	-	Data is missing due to technical error.
MW441	7.669	5.0	6	0.4	3.8	31/03/2025 12:09	2.924	4.745	5.29	HydraSleeve install visit.
MW441	7.669	5.0	6	0.4	3.8	4/04/2025 8:54	2.930	4.739	5.30	Sampling visit.
MW466	4.320	Unknown	Unknown	0.8	1.7	31/03/2025 15:35	1.334	2.986	3.22	HydraSleeve install visit.
MW466	4.320	Unknown	Unknown	0.8	1.7	4/04/2025 11:51	1.481	2.839	3.23	Sampling visit.
MW468	4.020	1.0	4	0.8	2.5	31/03/2025 15:40	0.985	3.035	4.04	HydraSleeve install visit.

Table T1 - Groundwater Gauging and Observations

Location Code	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW468	4.020	1.0	4	0.8	2.5	4/04/2025 11:35	1.130	2.890	4.05	Sampling visit.
MW536	1.864	Unknown	Unknown	0.0	2.4	26/05/2025 9:27	0.942	0.922	3.900	Soft base. HydraSleeve install visit.
MW536	1.864	Unknown	Unknown	0.0	2.1	27/05/2025 8:55	0.963	0.901	3.060	Sampling visit. Soft base.
MW537	1.579	Unknown	Unknown	0.0	1.5	26/05/2025 12:47	0.731	0.848	3.020	Soft base. HydraSleeve install visit.
MW537	1.579	Unknown	Unknown	0.0	1.5	27/05/2025 9:10	0.764	0.815	3.015	Sampling visit. Soft base.
MW538	1.295	Unknown	Unknown	0.0		26/05/2025 9:00	-	n/a	-	Unable to access due to floodwaters.
MW538	1.295	Unknown	Unknown	0.0	3.0	10/06/2025 10:51	1.010	0.285	4.501	HydraSleeve install visit.
MW538	1.295	Unknown	Unknown	0.0	3.0	10/06/2025 15:04	1.014	0.281	4.500	Sampling visit.
MW731D	2.190	18.5	20	0.0	19.6	8/04/2025 15:54	1.032	1.158	21.11	HydraSleeve install visit. Hinge on well monument lid broken.
MW731D	2.190	18.5	20	0.0	19.6	9/04/2025 14:05	1.049	1.141	21.10	Sampling visit. Hinge on well monument lid broken.
MW731S	2.050	2.5	5.5	0.0	4.4	8/04/2025 15:53	0.895	1.155	5.99	HydraSleeve install visit.
MW731S	2.050	2.5	5.5	0.0	4.4	9/04/2025 14:12	0.918	1.132	6.03	Sampling visit.
MW829	Unknown	Unknown	Unknown	0.0	n/a	7/04/2025 10:39	1.474	Unknown	11.96	Sampling visit.
MW842	Unknown	Unknown	Unknown	0.0	n/a	10/04/2025 9:22	1.467	Unknown	18.02	Sampling visit.
MW844	Unknown	Unknown	Unknown	0.0	n/a	10/04/2025 9:13	0.409	Unknown	5.99	Sampling visit.
MW886	7.910	2.0	5	0.0	4.1	31/03/2025 11:51	2.558	5.352	5.14	HydraSleeve install visit.
MW886	7.910	2.0	5	0.0	4.1	3/04/2025 16:04	0.000	7.910	5.08	Sampling visit. HydraSleeve blocking DTW
MW897D	7.340	17.0	20	0.8	20.0	1/04/2025 10:20	1.963	5.377	21.07	HydraSleeve install visit.
MW897D	7.340	17.0	20	0.8	20.0	3/04/2025 11:46	1.991	5.349	21.08	Sampling visit.
MW897S	7.440	3.0	6	0.9	6.0	1/04/2025 10:17	2.035	5.405	7.07	HydraSleeve install visit.
MW897S	7.440	3.0	6	0.9	6.0	3/04/2025 11:40	2.060	5.380	7.08	Sampling visit.
POT046	n/a	n/a	n/a	n/a	n/a	14/04/2025 9:04	n/a	n/a	n/a	Sampling visit.
POT085	n/a	n/a	n/a	n/a	n/a	14/04/2025 11:00	n/a	n/a	n/a	Unable to access - private property access not confirmed.
POT107	n/a	n/a	n/a	n/a	n/a	14/04/2025 9:42	n/a	n/a	n/a	Sampling visit.
POT144	n/a	n/a	n/a	n/a	n/a	3/04/2025 15:00	n/a	n/a	n/a	Sampling visit.
POT236	n/a	n/a	n/a	n/a	n/a	17/04/2025 8:00	n/a	n/a	n/a	Unable to access - private property access not confirmed.
POT303	n/a	n/a	n/a	n/a	n/a	27/05/2025 10:15	n/a	n/a	n/a	Sampling visit.
POT365	n/a	n/a	n/a	n/a	n/a	26/05/2025 10:05	n/a	n/a	n/a	Sampling visit.
POT382	n/a	n/a	n/a	n/a	n/a	16/04/2025 10:10	n/a	n/a	n/a	Sampling visit.

Notes
mAHD meters Australian Height Datum
mbgl meters below ground level
mbTOC meters below Top of Casing
n/a Not applicable or availble
- Not measured

Table T2 - Groundwater Quality Parameters and Observations

Location Code	Date	Sample Comment	Sampling Method	Water Quality Parameters					
				Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
				mg/L	°C	µS/cm	pH_Units	mV	mV
MW106D	3/04/2025	Brown, medium turbidity, sulphurous odour, no sheen	HydraSleeve	1.96	21.0	133.0	5.55	34.4	240.2
MW106S	3/04/2025	Brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.68	21.6	76.5	5.78	24.4	230.2
MW107D	9/04/2025	Light brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	4.25	18.7	115.1	5.46	-25.6	180.2
MW107S	9/04/2025	Light brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	2.65	19.4	139.8	4.79	-27.5	178.3
MW108D	4/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.88	20.6	249.0	6.66	-85.0	120.8
MW108S	4/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.15	22.0	111.3	4.91	75.6	281.4
MW109D	4/04/2025	Yellow, no turbidity, slight sulphurous odour, no sheen	HydraSleeve	2.95	20.5	165.7	6.68	-73.0	132.8
MW118	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.79	23.3	122.4	5.36	-36.4	169.4
MW121	3/04/2025	Clear, low turbidity, no odour, no sheen	HydraSleeve	3.70	22.6	127.6	6.22	-50.6	155.2
MW122	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.05	22.4	449.2	5.42	77.3	283.1
MW123	3/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.31	23.1	240.3	6.64	12.7	218.5
MW125D	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	6.91	21.3	557.0	6.43	-110.8	95.0
MW125S	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.87	22.4	437.6	5.93	-33.5	172.3
MW126D	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	5.57	19.6	174.5	6.67	-1.7	204.1
MW126S	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	6.04	20.8	279.5	6.54	-46.1	159.7
MW128D	9/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.62	20.5	2,317.0	7.82	-137.3	68.5
MW128S	9/04/2025	Grey, low turbidity, no odour, no sheen	HydraSleeve	2.48	19.7	6,757.0	7.35	-90.7	115.1
MW130D	10/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	5.80	19.2	111.1	4.85	-70.5	135.3
MW130S	10/04/2025	Light orange, no turbidity, no odour, no sheen	HydraSleeve	3.50	19.8	169.8	4.31	-32.5	173.3
MW132D	10/04/2025	Light brown, no turbidity, no odour, no sheen	HydraSleeve	5.10	20.6	176.7	5.24	-0.7	205.1
MW132I	10/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.84	19.7	155.3	4.17	22.8	228.6
MW134D	11/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.09	19.5	157.6	4.73	194.1	399.9
MW134I	11/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.94	20.0	159.2	4.41	211.0	416.8
MW137	9/04/2025	Yellow, low turbidity, sulfurous odour, no sheen	HydraSleeve	2.86	21.4	443.1	4.58	-11.4	194.4
MW139	14/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.97	24.2	312.4	5.05	28.9	234.7
MW142D	10/06/2025	Grey, low turbidity, no odour, no sheen	HydraSleeve	2.12	17.9	27,717.0	6.46	-42.2	163.6
MW142S	10/06/2025	Clear, low turbidity, slight organic odour, no sheen	HydraSleeve	2.58	17.7	31,623.0	6.95	-87.9	117.9
MW144	27/05/2025	Brown, medium turbidity, organic odour, no sheen.	HydraSleeve	2.30	17.6	2,100.0	6.56	-49.5	156.3
MW146AD	3/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.95	20.9	275.5	6.64	-150.3	55.5
MW146S	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	3.49	22.8	362.1	6.19	48.3	254.1
MW147D	11/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.32	21.5	30,405.0	6.14	14.4	220.2
MW147S	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.58	22.6	22,348.0	6.85	-101.2	104.6
MW150D	3/04/2025	Clear, low turbidity, slight sulphurous odour, no sheen	HydraSleeve	3.25	20.8	143.2	5.81	3.5	209.3
MW150S	3/04/2025	Clear, low turbidity, no odour, no sheen. White suspended organics	HydraSleeve	1.73	22.6	312.9	6.52	90.9	296.7
MW155	4/04/2025	Light yellow, no turbidity, slight organic odour, no sheen	HydraSleeve	3.09	23.3	199.2	5.67	193.6	399.4
MW159D	10/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.32	20.6	378.6	6.57	-51.6	154.2
MW159S	10/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.52	22.6	155.9	4.89	26.0	231.8
MW160	10/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	5.16	21.0	196.6	4.72	-74.0	131.8
MW161D	10/04/2025	Light grey, no turbidity, no odour, no sheen	HydraSleeve	2.61	22.7	237.1	6.05	48.9	254.7
MW161S	10/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.98	24.4	175.2	5.95	-166.3	39.5
MW162D	27/05/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.18	19.2	133.2	6.22	41.6	247.4
MW162S	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	6.35	23.8	134.6	5.91	93.5	299.3
MW163	9/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.11	23.0	9,164.0	6.75	-30.4	175.4
MW166	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.14	22.9	54.3	4.69	219.5	425.3
MW167	4/04/2025	Clear, low turbidity, no odour, no sheen	HydraSleeve	4.22	23.0	75.5	5.05	231.7	437.5
MW168	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.85	23.6	81.8	5.08	222.2	428.0
MW169D	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.86	21.2	161.3	6.35	91.5	297.3
MW169S	4/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	4.74	23.4	101.7	5.65	146.0	351.8
MW171D	4/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	1.95	22.7	170.2	6.66	-159.5	46.3
MW171S	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.52	23.4	103.0	4.56	177.6	383.4
MW172	1/04/2025	Brown, medium turbidity, sulphurous odour, no sheen	HydraSleeve	1.25	23.2	253.8	4.98	-35.5	170.3
MW175D	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.45	21.6	167.9	6.29	21.7	227.5

Table T2 - Groundwater Quality Parameters and Observations

Location Code	Date	Sample Comment	Sampling Method	Water Quality Parameters					
				Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
				mg/L	°C	µS/cm	pH_Units	mV	mV
MW178	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.50	21.5	450.7	5.56	-38.7	167.1
MW179D	1/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.93	22.7	207.1	6.51	-32.7	173.1
MW179S	1/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.54	24.2	190.5	5.16	-117.6	88.2
MW188D	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.28	20.1	166.8	6.90	-28.4	177.4
MW188S	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.29	22.0	686.0	6.93	-89.5	116.3
MW195	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.30	21.0	577.0	6.83	-51.6	154.2
MW196	11/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	4.36	22.6	92.0	5.25	54.0	259.8
MW198	11/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	4.02	22.6	153.8	5.81	87.5	293.3
MW200	11/04/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.06	22.5	51.4	4.79	-0.8	205.0
MW201D	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.17	21.6	73.9	5.82	124.3	330.1
MW201S	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.53	22.1	126.1	5.06	160.6	366.4
MW202D	1/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.05	22.1	218.9	4.46	195.0	400.8
MW202S	1/04/2025	Light brown, low turbidity, no odour, no sheen	HydraSleeve	2.37	24.3	225.8	6.04	149.5	355.3
MW208	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.72	22.6	127.9	5.61	188.1	393.9
MW210D	4/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.92	22.2	53.3	6.17	175.5	381.3
MW210S	4/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	2.77	23.6	269.6	5.70	182.9	388.7
MW230S	15/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.12	20.7	386.9	6.00	31.6	237.4
MW231D	17/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	8.13	21.8	20,555.0	6.79	-207.5	-1.7
MW231S	17/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.35	22.9	20,294.0	6.68	-138.0	67.8
MW232D	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.01	19.7	14,652.0	7.44	-60.1	145.7
MW232S	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.09	20.8	1,528.0	7.08	94.4	300.2
MW240D	16/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.38	19.7	191.4	6.23	28.3	234.1
MW241D	9/04/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.34	19.4	93.5	5.82	-20.2	185.6
MW241S	9/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.44	22.0	77.7	4.94	-48.3	157.5
MW245D	11/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.28	20.4	186.6	5.81	2.7	208.5
MW245S	11/04/2025	Dark yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.90	22.1	139.9	4.11	50.9	256.7
MW247D	3/04/2025	Light brown, medium turbidity, no odour, no sheen	HydraSleeve	2.56	20.2	149.1	5.96	70.6	276.4
MW247S	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.05	23.5	230.0	4.72	108.6	314.4
MW255D	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.44	22.0	28,758.0	6.81	-101.4	104.4
MW255S	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.50	24.9	1,626.0	6.20	-10.7	195.1
MW256D	3/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.56	20.1	134.9	6.25	-145.3	60.5
MW256S	3/04/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.27	22.4	140.6	4.38	-15.3	190.5
MW257D	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.56	20.4	40.6	6.16	-60.8	145.0
MW257S	3/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.88	23.3	69.4	5.37	44.4	250.2
MW260D	3/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.06	20.8	22,946.0	5.42	46.6	252.4
MW260S	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	3.06	23.5	10,653.0	6.41	-28.7	177.1
MW262D	10/06/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.50	17.0	39,447.0	6.48	-137.4	68.4
MW262S	10/06/2025	Brown, low turbidity, organic odour, no sheen	HydraSleeve	0.69	17.4	7,087.0	6.84	-148.6	57.2
MW264D	10/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.24	18.9	221.7	6.25	-8.7	197.1
MW264S	10/04/2025	Brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	3.38	20.9	171.4	5.14	-42.5	163.3
MW266S	15/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.33	22.8	41,842.0	6.74	-86.7	119.1
MW270D	15/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.45	20.8	178.7	6.69	-104.7	101.1
MW270S	15/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.76	21.6	292.8	6.52	-124.7	81.1
MW271D	14/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	3.09	19.3	208.2	6.04	33.1	238.9
MW271S	14/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.56	19.6	368.0	5.42	-9.8	196.0
MW278D	3/04/2025	Yellow, low turbidity, sulphurous odour, no sheen	HydraSleeve	4.01	19.5	425.8	6.58	-108.5	97.3
MW278S	3/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	4.02	21.2	193.7	6.52	-73.7	132.1
MW279S	9/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	4.11	23.5	4,343.0	6.88	-45.6	160.2
MW280S	9/04/2025	Brown, high turbidity, sulphurous odour, no sheen	HydraSleeve	4.92	20.4	123.8	4.84	-68.6	137.2
MW281S	16/04/2025	Light yellow, no turbidity, no sheen	HydraSleeve	4.98	20.4	170.0	4.96	-69.2	136.6
MW282S	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.82	20.2	152.8	5.05	-57.0	148.8
MW304	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.91	22.4	253.7	5.22	203.3	409.1

Table T2 - Groundwater Quality Parameters and Observations

Location Code	Date	Sample Comment	Sampling Method	Water Quality Parameters					
				Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
				mg/L	°C	µS/cm	pH_Units	mV	mV
MW315D	9/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.65	19.5	97.6	5.41	10.0	215.8
MW315S	9/04/2025	Light brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.62	20.5	151.3	4.61	-58.0	147.8
MW316D	9/04/2025	Brown, low turbidity, no odour, no sheen	HydraSleeve	1.82	20.4	24,014.0	6.73	-53.7	152.1
MW317D	11/04/2025	Grey, low turbidity, no odour, no sheen	HydraSleeve	2.84	20.0	180.9	5.14	-22.2	183.6
MW317S	11/04/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	2.67	22.0	153.2	4.54	-51.0	154.8
MW318D	10/04/2025	Yellow, low turbidity, no odour, no sheen	HydraSleeve	2.44	19.9	305.1	6.04	-109.3	96.5
MW318S	10/04/2025	Brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	2.94	22.2	135.8	4.72	-144.8	61.0
MW329	16/04/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.88	20.0	175.9	4.82	-53.0	152.8
MW340D	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.75	18.6	104.3	5.84	-137.3	68.5
MW340S	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	4.81	19.7	147.3	4.42	-65.8	140.0
MW342D	16/04/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	5.01	19.0	205.7	6.25	-55.3	150.5
MW344D	16/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.88	20.5	192.8	6.20	-75.3	130.5
MW344S	16/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	3.77	20.7	113.5	5.47	-47.5	158.3
MW354S	16/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.98	19.9	149.1	4.40	-31.4	174.4
MW441	4/04/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	4.45	21.2	169.0	5.78	194.5	400.3
MW466	4/04/2025	Brown, no turbidity, no odour, no sheen	HydraSleeve	4.88	21.8	128.6	4.97	-5.1	200.7
MW468	4/04/2025	Yellow, no turbidity, no odour, no sheen	HydraSleeve	3.35	21.2	135.0	5.34	-58.6	147.2
MW536	27/05/2025	Grey, high turbidity, organic odour, no sheen	HydraSleeve	6.60	18.2	10,075.0	6.21	114.4	320.2
MW537	27/05/2025	Light brown, medium turbidity, organic odour, no sheen.	HydraSleeve	5.47	18.2	12,489.0	6.34	-118.2	87.6
MW538	10/06/2025	Clear, no turbidity, no odour, no sheen.	HydraSleeve	2.40	17.5	26,170.0	6.67	-99.3	106.5
MW731D	9/04/2025	Grey, high turbidity, no odour, no sheen	HydraSleeve	2.58	20.3	571.0	6.48	-58.6	147.2
MW731S	9/04/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	3.33	20.7	188.8	5.84	-82.2	123.6
MW829	7/04/2025	Clear, no turbidity, no odour, no sheen	Bailer	4.05	24.5	202.5	4.55	232.6	438.4
MW842	10/04/2025	Clear, no turbidity, sulphurous odour, no sheen	Peristaltic pump	3.54	22.1	220.2	5.74	-99.0	106.8
MW844	10/04/2025	Clear, no turbidity, sulphurous odour, no sheen	Peristaltic pump	2.84	22.7	89.9	5.10	-54.9	150.9
MW886	3/04/2025	Brown, medium turbidity, no odour, no sheen	HydraSleeve	1.73	24.6	136.3	5.28	201.7	407.5
MW897D	3/04/2025	Light brown, low turbidity, slight organic odour, no sheen	HydraSleeve	4.04	20.7	603.0	7.01	-120.2	85.6
MW897S	3/04/2025	Orange, no turbidity, no odour, no sheen	HydraSleeve	2.32	21.5	125.5	5.10	143.1	348.9
POT046	14/04/2025	Clear colour, no turbidity, sulphurous odour, no sheen	Grab - from tap	3.02	20.9	176.8	5.55	-64.7	141.1
POT107	14/04/2025	Light yellow colour, no turbidity, sulphurous odour, no sheen	Grab - from tap	2.49	22.4	343.6	6.12	-106.6	99.2
POT144	3/04/2025	Clear, no turbidity, no odour, no sheen	Grab - from tap	2.85	26.9	144.0	6.50	-34.8	171.0
POT303	27/05/2025	Clear, no turbidity, sulphurous odour, no sheen.	Grab - from tap	1.71	18.8	395.4	7.01	-77.5	128.3
POT365	26/05/2025	Light yellow, no turbidity, no odour, no sheen	Grab - from tap	3.93	17.7	563.0	6.57	209.3	415.1
POT382	16/04/2025	Clear, no turbidity, no odour, no sheen	Grab - from tap	2.29	23.1	2,210.0	6.75	-17.2	188.6

Notes
Corrected field Oxidation-Reduction Potential measurement Eh = Er + 205.8
mg/L milligrams per Litre
°C degrees Celsius
µS/cm microSiemens per centimetre
mV milliVolts
n/a not applicable
- not measured

Table T3 - Surface Water Quality Parameters and Observations

Location Code	Date	Location Comment	Sample Depth From (m)	Sample Depth To (m)	Sample Comment	Water Quality Parameters					
						Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
						mg/L	°C	µS/cm	pH_Units	mV	mV
SW001	2/04/2025	Creek/drain. 5m wide, 1m deep. No flow observed.	0.40	0.50	Clear, no turbidity, no odour, no sheen.	5.08	19.9	157.9	5.09	115.0	320.8
SW005	2/04/2025	Creek. 4m wide, 1m deep. No flow observed. Biosheen on water surface.	0.15	0.25	Light yellow, no turbidity, no odour, no sheen.	4.35	19.3	413.2	5.97	120.3	326.1
SW006	2/04/2025	Creek/drain. 3m wide, 0.3m deep. No flow observed. Biosheen on water surface.	0.05	0.15	Brown, no turbidity, no odour, no sheen.	2.79	17.9	186.8	6.96	103.2	309.0
SW007	2/04/2025	Creek/drain. 1m wide, 0.5 deep. Flow observed.	0.15	0.25	Clear, no turbidity, no odour, no sheen.	5.62	19.8	140.0	6.69	108.8	314.6
SW009	2/04/2025	Creek. 5m wide, 0.5m deep. No flow observed.	0.15	0.25	Light brown, no turbidity, no odour, no sheen.	3.38	19.1	126.4	6.15	105.5	311.3
SW011	7/04/2025	Creek. 5m wide, 0.5m deep. Flow observed. Biosheen on water surface.	0.20	0.30	Light yellow, no turbidity, no odour, no sheen	4.37	25.2	183.0	5.66	162.3	368.1
SW014	2/04/2025	Creek. 6m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	4.30	19.3	157.8	5.70	124.9	330.7
SW019	14/04/2025	Creek. 10m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen	9.53	23.5	950.0	7.21	-17.8	188.0
SW023	2/04/2025	Creek. 5m wide, 2m deep. Flow observed.	0.90	1.00	Light yellow, no turbidity, no odour, no sheen.	2.61	20.5	822.0	6.87	133.9	339.7
SW024	2/04/2025	Creek. 10m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	3.12	20.0	4,317.0	6.97	109.8	315.6
SW047	2/04/2025	Drain. 5m wide, 1m deep. No flow observed.	0.40	0.50	Clear, no turbidity, no odour, no sheen.	3.40	21.8	155.4	6.07	87.3	293.1
SW048	2/04/2025	Drain. 6m wide, 0.3m deep. No flow observed. Biosheen on water surface.	0.05	0.15	Clear, no turbidity, no odour, no sheen.	6.66	21.6	86.4	5.31	162.4	368.2
SW055	2/04/2025	Drain. 3m wide, 0.5m deep. Flow observed.	0.15	0.25	Clear, no turbidity, no odour, no sheen.	4.16	20.9	111.3	6.05	109.1	314.9
SW059	2/04/2025	Creek. 5m wide, 2m deep. No flow observed.	0.90	1.00	Brown, no turbidity, no odour, no sheen.	2.15	18.8	168.4	5.09	185.1	390.9
SW060	2/04/2025	Creek. 4m wide, 1.5m deep. No flow observed.	0.65	0.75	Brown, no turbidity, no odour, no sheen.	2.32	18.3	333.4	5.46	99.6	305.4
SW062	2/04/2025	Creek. 5m wide, 1m deep. Flow observed.	0.30	0.40	Yellow, no turbidity, no odour, no sheen.	1.66	18.7	1,125.0	6.77	93.8	299.6
SW079	2/04/2025	Creek. 3m wide, 1m deep. No flow observed. Biosheen on water surface.	0.40	0.50	Yellow, no turbidity, no odour, no sheen.	2.41	20.0	961.0	6.56	28.0	233.8
SW081	2/04/2025	Creek. 5m wide, 1m deep. Flow observed.	0.30	0.40	Brown, no turbidity, no odour, no sheen.	2.25	18.7	598.0	5.47	121.6	327.4
SW108	2/04/2025	Lake Cochran. 100m wide, 1.5m deep. No flow observed.	0.65	0.75	Clear, no turbidity, no odour, no sheen.	3.73	21.7	105.8	6.40	106.4	312.2
SW110	2/04/2025	Lake Cochran. 50m wide, 2m deep. Flow observed.	0.90	1.00	Clear, no turbidity, no odour, no sheen.	5.47	21.8	124.8	6.67	121.5	327.3
SW259	17/04/2025	Creek. 10m wide. 1.5m deep. Flow observed.	0.40	0.50	Yellow, no turbidity, no odour, no sheen.	6.81	22.7	9,934.0	6.88	20.0	225.8
SW333	16/04/2025	Creek. 5m wide, 1m deep. No flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	2.93	20.3	614.0	6.12	18.3	224.1
SW582	16/04/2025	Closed drain (manhole). 4m to SWL, approximately 0.3m deep. Flow observed	0.10	0.20	Clear, no turbidity, sulphurous odour, no sheen.	7.22	21.4	155.5	5.72	16.8	222.6
SW588	2/04/2025	Closed drain (stormwater grate). 1.5m long, 1m wide, 0.5m deep. No flow observed.	0.10	0.20	Clear, no turbidity, no odour, no sheen.	1.39	21.9	159.2	6.34	127.4	333.2
SW600	10/04/2025	Creek. 5m wide, 1m deep. No flow observed.	0.40	0.50	Yellow, no turbidity, organic odour, no sheen.	9.72	26.3	1,338.0	7.15	36.1	241.9

Notes
Corrected field Oxidation-Reduction Potential measurement Eh = Er + 205.8
mg/L milligrams per Litre
°C degrees Celsius
µS/cm microSiemens per centimetre
mV milliVolts

Table T4 - Sediment Observations

Location Code	Date	Sample Depth From (m)	Sample Depth To (m)	Sample Comment
SD001	2/04/2025	0.10	0.20	Sandy SILT: brown, fine to medium grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD005	2/04/2025	0.10	0.20	Sandy CLAY: brown, fine grain sands, high plasticity, damp, with organic inclusions (rootlets). Organic odour, no staining.
SD006	2/04/2025	0.10	0.20	Sandy SILT: brown, fine grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD007	2/04/2025	0.10	0.20	SAND: grey to brown, fine to medium grain sands, no plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD009	2/04/2025	0.10	0.20	Sandy SILT: brown, fine grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD011	7/04/2025	0.10	0.20	Silty SAND: dark brown, medium to coarse grain sands, no plasticity, saturated, no inclusions. No odour, no staining.
SD014	2/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, medium plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD019	14/04/2025	0.10	0.20	SILT: brown, fine grain, medium plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD023	2/04/2025	0.10	0.20	Sandy SILT: brown, fine grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD024	2/04/2025	0.10	0.20	Sandy CLAY: brown, fine to medium grain sands, medium plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD047	2/04/2025	0.10	0.20	SAND: yellow to grey, medium to coarse grain sands, low plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD048	2/04/2025	0.10	0.20	Silty SAND: grey, fine to medium grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD055	2/04/2025	0.10	0.20	Sandy SILT: brown, medium to coarse grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD059	2/04/2025	0.10	0.20	Silty SAND: brown, medium to coarse grain sands, low plasticity, saturated, with inclusions (gravels and rootlets). No odour, no staining.
SD060	2/04/2025	0.10	0.20	Silty SAND: grey, medium to coarse grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD062	2/04/2025	0.10	0.20	Sandy CLAY: brown, medium to coarse grain sands, low plasticity, wet, with organic inclusions (rootlets). No odour, no staining.
SD079	2/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, low plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD081	2/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, medium plasticity, saturated, with organic inclusions (rootlets). Organic odour, no staining.
SD108	2/04/2025	0.10	0.20	Sandy SILT: brown, medium to coarse grain sands, low plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD110	2/04/2025	0.10	0.20	Silty SAND: grey to black, medium to coarse grain sands, no plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD254	17/04/2025	0.10	0.20	Silty SAND: Brown, fine to medium grain, low plasticity, saturated, with inclusions (shells and rootlets). No odour, no staining.
SD255	17/04/2025	0.10	0.20	SILT: brown, fine grain, high plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD259	17/04/2025	0.10	0.20	Silty SAND: brown, fine grain, low plasticity, saturated, no inclusions. No odour, no staining.
SD326	17/04/2025	0.10	0.20	SILT: black, fine grain, high plasticity, saturated, with organic inclusions (rootlets). No odour, no staining.
SD333	16/04/2025	0.10	0.20	Silty CLAY: brown, fine grain, high plasticity, damp, with organic inclusions (rootlets). No odour, no staining.
SD600	10/04/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, wet, with organic inclusions (rootlets). Organic odour, no staining.

Table T5 - Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDaA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001	
LOR	0.2	0.008	0.03			1																											
NHMRC 2025 Drinking Water	10			2																													
PFAS NEMP 2025 Recreational Water	19	0.00023																															
PFAS NEMP 2025 Freshwater 99%																																	

Location	Date	Field ID	Sample Type	Lab Report #	On-base/Management Zone	Risk Zone	0.01	0.19	0.16	0.35	0.39	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW106D	03 Apr 2025	0908_MW106D_250403	Normal	ES2509682	On-base	-																																		
MW106S	03 Apr 2025	0908_MW106S_250403	Normal	ES2509682	On-base	-	<0.01	0.07	0.01	0.08	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW107D	09 Apr 2025	0908_MW107D_250409	Normal	ES2510539	Secondary Management Zone	Risk Zone C	<0.002	<0.002	0.007	0.007	0.016	<0.01	0.003	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005
MW107S	09 Apr 2025	0908_MW107S_250409	Normal	ES2510539	Secondary Management Zone	Risk Zone C	<0.002	0.003	0.002	0.005	0.036	<0.01	0.008	0.003	<0.002	-	<0.002	<0.005	<0.01	0.003	0.017	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005
MW108D	04 Apr 2025	0908_MW108D_250404	Normal	ES2509682	On-base	-	0.01	<0.01	0.5	0.5	0.59	<0.02	0.02	0.03	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW108S	04 Apr 2025	0908_MW108S_250404	Normal	ES2509682	On-base	-	<0.01	0.29	0.15	0.44	0.47	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW109D	04 Apr 2025	0908_MW109D_250404	Normal	ES2509682	On-base	-	0.04	2.11	0.65	2.76	3.08	<0.02	0.03	0.04	0.03	<0.02	<0.02	<0.05	<0.1	0.05	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW118	03 Apr 2025	0908_MW118_250403	Normal	ES2509682	Broader Management Zone	Risk Zone B	<0.002	<0.002	0.004	0.004	0.004	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW121	03 Apr 2025	0908_MW121_250403	Normal	ES2509682	Secondary Management Zone	Risk Zone B	<0.01	0.08	0.03	0.11	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW122	03 Apr 2025	0908_MW122_250403	Normal	ES2509682	Secondary Management Zone	Risk Zone B	<0.002	0.002	0.013	0.015	0.023	<0.01	0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW123	03 Apr 2025	0908_MW123_250403	Normal	ES2509682	Secondary Management Zone	Risk Zone B	<0.01	0.04	0.02	0.06	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW125D	03 Apr 2025	0908_MW125D_250403	Normal	ES2509682	Secondary Management Zone	Risk Zone C	<0.002	0.013	<0.002	0.013	0.013	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW125S	03 Apr 2025	0908_MW125S_250403	Normal	ES2509682	Secondary Management Zone	Risk Zone C	<0.002	<0.002	0.004	0.004	0.004	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW126D	03 Apr 2025	0908_MW126D_250403	Normal	ES2509682	Primary Management Zone	Risk Zone A	<0.002	0.034	0.011	0.045	0.095	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	0.01	0.026	0.007	0.007	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW126S	03 Apr 2025	0908_MW126S_250403	Normal	ES2509682	Primary Management Zone	Risk Zone A	0.18	3.93	2.62	6.55	8.5	0.15	0.22	0.23	0.36	<0.02	<0.02	<0.05	<0.1	0.1	0.63	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW128D	09 Apr 2025	0908_MW128D_250409	Normal	ES2510539	Broader Management Zone	Risk Zone C	<0.002	0.004	<0.002	0.004	0.004	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW128S	09 Apr 2025	0908_MW128S_250409	Normal	ES2510539	Broader Management Zone	Risk Zone C	<0.002	<0.002	0.038	0.038	0.038	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW130D	10 Apr 2025	0908_MW130D_250410	Normal	ES2510539	Secondary Management Zone	Risk Zone C	<0.002	<0.002	0.009	0.009	0.009	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW130S	10 Apr 2025	0908_MW130S_250410	Normal	ES2510539	Secondary Management Zone	Risk Zone C	<0.002	<0.002	0.003	0.003	0.003	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW132D	10 Apr 2025	0908_MW132D_250410	Normal	ES2510539	Secondary Management Zone	Risk Zone B	0.01	0.89	0.24	1.13	1.22	<0.02	<0.02	<0.02	0.05	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW132D	10 Apr 2025	0908_QC114_250410	Field_D	ES2510539	Secondary Management Zone	Risk Zone B	0.01	0.78	0.22	1	1.07	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW132D	10 Apr 2025	0908_QC214_250410	Interlab_D	378731-A	Secondary Management Zone	Risk Zone B	0.02	0.86	0.25	1.1	1.2	-	<0.01	0.01	0.05	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW132I	10 Apr 2025	0908_MW132I_250410	Normal	ES2510539	Secondary Management Zone	Risk Zone B	<0.01	0.18	0.03	0.21	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW134D	11 Apr 2025	0908_MW134D_250411	Normal	ES2510539	On-base	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW134D	11 Apr 2025	0908_QC116_250411	Field_D	ES2510539	On-base	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW134D	11 Apr 2025	0908_QC216_250411	Interlab_D	378731-A	On-base	-	<0.01	<0.01	0.01	0.01	0.01	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.									

Location	Date	Field ID	Sample Type	Lab Report #	On-base/Management Zone	Risk Zone		<0.01	0.09	0.14	0.23	0.23	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW169D	04 Apr 2025	0908_MW169D_250404	Normal	ES2509682	On-base	-		<0.01	0.09	0.14	0.23	0.23	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW169D	04 Apr 2025	0908_QC107_250404	Field_D	ES2509682	On-base	-		<0.01	0.09	0.14	0.23	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW169D	04 Apr 2025	0908_QC207_250404	Interlab_D	378731-A	On-base	-		<0.01	0.07	0.14	0.21	0.26	-	0.01	0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW169S	04 Apr 2025	0908_MW169S_250404	Normal	ES2509682	On-base	-		<0.01	0.15	0.1	0.25	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171D	04 Apr 2025	0908_MW171D_250404	Normal	ES2509682	On-base	-		0.01	0.06	0.6	0.66	1.38	0.09	0.17	0.09	<0.02	<0.02	<0.05	<0.1	0.06	0.28	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	04 Apr 2025	0908_MW171S_250404	Normal	ES2509682	On-base	-		0.06	0.65	1.25	1.9	2.34	<0.02	0.04	0.05	0.19	<0.02	<0.02	<0.05	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	01 Apr 2025	0908_MW172_250401	Normal	ES2509682	On-base	-		0.03	0.03	2.87	2.9	3.58	0.03	0.18	0.32	<0.02	<0.02	<0.05	<0.1	0.02	0.08	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW175D	04 Apr 2025	0908_MW175D_250404	Normal	ES2509682	On-base	-		0.07	3.5	0.84	4.34	5.01	<0.02	0.05	0.05	0.05	<0.02	<0.02	<0.05	<0.1	0.08	0.26	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW178	03 Apr 2025	0908_MW178_250403	Normal	ES2509682	Primary Management Zone	Risk Zone C		<0.01	0.05	0.19	0.24	0.39	<0.02	0.05	0.05	<0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW179D	01 Apr 2025	0908_MW179D_250401	Normal	ES2509682	On-base	-		0.05	0.19	1.31	1.5	2.57	0.1	0.25	0.19	0.06	<0.02	<0.02	<0.05	<0.1	0.07	0.32	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW179S	01 Apr 2025	0908_MW179S_250401	Normal	ES2509682	On-base	-		0.53	0.48	1.9	2.38	3.73	<0.02	0.06	0.05	0.09	<0.02	<0.02	<0.05	<0.1	0.14	0.38	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW188D	03 Apr 2025	0908_MW188D_250403	Normal	ES2509682	Primary Management Zone	Risk Zone A		<0.01	0.04	<0.01	0.04	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW188S	03 Apr 2025	0908_MW188S_250403	Normal	ES2509682	Primary Management Zone	Risk Zone A		0.09	2.51	0.71	3.22	3.98	0.04	0.12	0.1	0.08	<0.02	<0.02	<0.05	<0.1	0.06	0.23	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW195	03 Apr 2025	0908_MW195_250403	Normal	ES2509682	Secondary Management Zone	Risk Zone B		0.01	0.09	0.14	0.23	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW196	11 Apr 2025	0908_MW196_250411	Normal	ES2510539	On-base	-		0.03	3.89	0.34	4.23	4.35	<0.02	<0.02	<0.02	0.04	0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW198	11 Apr 2025	0908_MW198_250411	Normal	ES2510539	On-base	-		0.07	1.6	2.11	3.71	4.26	<0.02	0.03	0.12	0.09	<0.02	<0.02	<0.05	<0.1	0.04	0.17	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW200	11 Apr 2025	0908_MW200_250411	Normal	ES2510539	On-base	-		<0.01	0.29	0.08	0.37	0.4	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW201D	11 Apr 2025	0908_MW201D_250411	Normal	ES2510539	On-base	-		<0.01	0.01	<0.01	0.01	0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW201S	11 Apr 2025	0908_MW201S_250411	Normal	ES2510539	On-base	-		0.05	1.8	0.49	2.29	2.56	<0.02	<0.02	0.03	0.05	<0.02	<0.02	<0.05	<0.1	0.05	0.07	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW202D	01 Apr 2025	0908_MW202D_250401	Normal	ES2509682	On-base	-		<0.01	0.04	0.02	0.06	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW202D	01 Apr 2025	0908_QC100_250401	Field_D	ES2509682	On-base	-		<0.01	0.05	0.03	0.08	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW202D	01 Apr 2025	0908_QC200_250401	Interlab_D	378731-A	On-base	-		<0.01	0.04	0.02	0.06	0.06	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.5		
MW202S	01 Apr 2025	0908_MW202S_250401	Normal	ES2509682	On-base	-		0.02	1.08	0.19	1.27	1.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW208	04 Apr 2025	0908_MW208_250404	Normal	ES2509682	On-base	-		0.21	23.3	2.86	26.2	27.8	<0.02	0.07	0.11	0.32	0.09	<0.02	<0.05	0.1	0.2	0.41	0.12	0.03	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW210D	04 Apr 2025	0908_MW210D_250404	Normal	ES2509682	On-base	-		<0.01	0.02	<0.01	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	04 Apr 2025	0908_MW210S_250404	Normal	ES2509682	On-base	-		0.13	2.54	0.9	3.44	4.9	0.04	0.11	0.12	0.09	<0.02	<0.02	<0.05	0.1	0.14	0.65	0.08	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW230S	15 Apr 2025	0908_MW230S_250415	Normal	ES2511277	Secondary Management Zone	Risk Zone C		0.004	<0.002	0.022	0.022	0.051	<0.01	0.007	0.004	<0.002	-	<0.002	<0.005	<0.01	0.004	0.01	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005		
MW231D	17 Apr 2025	0908_MW231D_250417	Normal	ES2511279	Broader Management Zone	Risk Zone C		<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005		
MW231S	17 Apr 2025	0908_MW231S_250417	Normal	ES2511279	Broader Management Zone	Risk Zone C		<0.01	0.08	0.02	0.1	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.												

Table T5 - Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOsAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOsAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
	LOR	0.2	0.008	0.03			1																										
NHMRC 2025 Drinking Water	10			2																													
PFAS NEMP 2025 Recreational Water	19	0.00023																															
PFAS NEMP 2025 Freshwater 99%																																	

	Date	Field ID	Sample Type	Lab Report #	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															</
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Table T5 - Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
	LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005
NHMRC 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Lab Report #	On-base/Management Zone	Risk Zone																																
POT365	26 May 2025	0908_POT365_250526	Normal	ES2515730	Broader Management Zone	Risk Zone C	<0.002	0.002	<0.002	0.002	0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
POT382	16 Apr 2025	0908_POT382_250416	Normal	ES2511279	Broader Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005

Notes
LOR Limit of Reporting
Normal Primary sample
Field_D Intra-laboratory duplicate sample
Interlab_D Inter-laboratory duplicate sample

Satiation	Date	Field ID	Sample Type	Lab Report #	On-base/Management Zone	Region
SW001	02 Apr 2025	0908_SW001_250402	Normal	ES2509682	Secondary Management Zone	Region 1
SW005	02 Apr 2025	0908_SW005_250402	Normal	ES2509682	Broader Management Zone	Region 1
SW006	02 Apr 2025	0908_SW006_250402	Normal	ES2509682	Secondary Management Zone	Region 1
SW007	02 Apr 2025	0908_SW007_250402	Normal	ES2509682	Secondary Management Zone	Region 1
SW009	02 Apr 2025	0908_SW009_250402	Normal	ES2509682	Secondary Management Zone	Region 1
SW011	07 Apr 2025	0908_SW011_250407	Normal	ES2510539	Secondary Management Zone	Region 1
SW011	07 Apr 2025	0908_QC110_250407	Field_D	ES2510539	Secondary Management Zone	Region 1
SW011	07 Apr 2025	0908_QC210_250407	Interlab_D	378731-A	Secondary Management Zone	Region 1
SW014	02 Apr 2025	0908_SW014_250402	Normal	ES2509682	Broader Management Zone	Region 1
SW019	14 Apr 2025	0908_SW019_250414	Normal	ES2511273	Secondary Management Zone	Region 2
SW023	02 Apr 2025	0908_SW023_250402	Normal	ES2509682	Secondary Management Zone	Region 2
SW024	02 Apr 2025	0908_SW024_250402	Normal	ES2509682	Broader Management Zone	Region 2
SW047	02 Apr 2025	0908_SW047_250402	Normal	ES2509682	On-base	-
SW048	02 Apr 2025	0908_SW048_250402	Normal	ES2509682	On-base	-
SW055	02 Apr 2025	0908_SW055_250402	Normal	ES2509682	On-base	-
SW059	02 Apr 2025	0908_SW059_250402	Normal	ES2509682	Secondary Management Zone	Region 3
SW060	02 Apr 2025	0908_SW060_250402	Normal	ES2509682	Primary Management Zone	Region 3
SW062	02 Apr 2025	0908_SW062_250402	Normal	ES2509682	Broader Management Zone	Region 3
SW079	02 Apr 2025	0908_SW079_250402	Normal	ES2509682	Broader Management Zone	Region 3
SW081	02 Apr 2025	0908_SW081_250402	Normal	ES2509682	Broader Management Zone	Region 3
SW081	17 Jun 2025	0908_SW081_250617	Normal	ES2518169	Broader Management Zone	Region 3
SW108	02 Apr 2025	0908_SW108_250402	Normal	ES2509682	On-base	-
SW108	02 Apr 2025	0908_QC102_250402	Field_D	ES2509682	On-base	-
SW110	02 Apr 2025	0908_SW110_250402	Normal	ES2509682	On-base	-
SW259	17 Apr 2025	0908_SW259_250417	Normal	ES2511276	Broader Management Zone	Marine
SW333	16 Apr 2025	0908_SW333_250416	Normal	ES2511281	Primary Management Zone	Region 3
SW582	16 Apr 2025	0908_SW582_250416	Normal	ES2511299	On-base	-
SW588	02 Apr 2025	0908_SW588_250402	Normal	ES2509682	On-base	-
SW600	10 Apr 2025	0908_SW600_250410	Normal	ES2510538	Secondary Management Zone	Region 3

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Table T7 - Sediment Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0002	0.0002	0.0005	0.0002	0.0005

Location	Date	Field ID	Sample Type	Lab Report #	On-base/Management Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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[illegible]

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MW107S	11 Jan 2021	0908 MW107 S 210111	Normal	NSW 0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.0005	0.0004	<0.0005	0.0004	0.0004	-	<0.0005	<0.0005	<0.0005	-	<0.0005	-	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001		
MW107S	11 Jan 2021	0908 QC100 210111	Field D	NSW 0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.0005	0.0003	<0.0005	0.0003	0.0003	-	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.002	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001		
MW107S	11 Jan 2021	0908 QC200 210111	Interlab D	NSW 0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.001	<0.002	<0.001	<0.002	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005	<0.002	<0.002	<0.005		
MW107S	20 Sep 2021	0908 MW107S 210920	Normal	NSW 0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.002	<0.002	0.002	0.002	0.002	-	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.005	<0.005	<0.002	<0.005		
MW107S	17 Nov 2021	0908 MW107S 211117	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW107S	13 Jan 2022	0908 MW107S 220113	Normal	NSW 0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.0005	0.0008	0.0016	0.0024	0.0178	-	0.0011	0.0005	<0.0005	-	<0.0005	-	0.008	0.0028	0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.001	<0.0005	<0.001		
MW107S	11 Nov 2022	0908 MW107S 221111	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW107S	12 May 2023	0908 MW107S 230512	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW107S	23 Nov 2023	0908 MW107S 231123	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW107S	23 Apr 2024	0908 MW107S 240423	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW107S	09 Apr 2025	0908 MW107S 250409	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	0.003	0.002	0.005	0.036	<0.01	0.008	0.003	<0.002	-	<0.002	<0.005	<0.01	0.003	0.017	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW108D	17 Nov 2014	MW108-D 17112014	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	0.11	0.11	-	-	<0.01	-	-	-	<0.01	-	-	<0.01	0.02	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005		
MW108D	21 Jan 2016	MW108D 21012016	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW108D	29 Aug 2016	MW108D 290816	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.01	0.03	0.04	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	<0.05	-	-
MW108D	17 Oct 2016	MW108D 171016	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	0.03	0.03	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	-	
MW108D	13 Jan 2017	MW108D 130117	Normal	ACTNSW Hist 202012-3	On-base	-	<0.01	0.04	0.43	0.47	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	-	
MW108D	24 Jan 2017	MW108D GW 24012017	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	1.14	1.14	1.29	-	0.02	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108D	07 Mar 2017	MW108D 070317	Normal	ACTNSW Hist 202012-3	On-base	-	<0.01	<0.01	0.56	0.56	0.63	-	<0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108D	02 May 2017	MW108D 020517	Normal	ACTNSW Hist 202012-3	On-base	-	<0.01	0.01	0.55	0.55	-	-	<0.01	0.02	<0.01	-	<0.01	-	<0.05	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW108D	04 Apr 2018	MW108D GW 04042018	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	0.4	0.4	0.58	-	0.02	0.02	<0.02	-	<0.02	-	0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108D	04 Apr 2018	MW108D GW 04042018	Normal	NSW 0908 PFAS	On-base	-	-	-	-	0.41	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW108D	29 Nov 2018	0908 MW108D 181129	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	0.37	0.37	0.46	-	0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108D	29 Nov 2018	0908 MW108D 181129	Normal	NSW 0908 PFAS	On-base	-	-	-	0.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW108D	31 May 2019	0908 MW108D 190531	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	0.38	0.38	0.54	-	0.05	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW108D	31 May 2019	0908 MW108D 190531	Normal	NSW 0908 PFAS	On-base	-	-	-	-	0.39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW108D	31 May 2019	0908 QC105 190531	Field D	NSW 0908 PFAS	On-base	-	<0.01	<0.01	0.37	0.37	0.51	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW108D	31 May 2019	0908 QC105 190531	Field D	NSW 0908 PFAS	On-base	-	-	-	-	0.38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW108D	31 May 2019	0908 QC205 190531	Interlab D	NSW 0908 PFAS	On-base	-	<0.01	<0.02	0.36	0.38	-	-	0.046	0.041	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	0.059	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
MW108D	08 Nov 2019	0908 MW108D 191108	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.46	0.46	0.76	-	0.08	0.08	<0.02	-	<0.02	-	<0.1	0.03	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108D	11 May 2020	0908 MW108D 200511	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.44	0.44	0.8	-	0.1	0.11	<0.02	-	<0.02	-	<0.1	0.02	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108D	17 Nov 2020	0908 MW108 D 201117	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.23	0.23	0.35	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108D	17 May 2021	0908 MW108D 210517	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.55	0.55	0.86	-	0.07	0.1	<0.02	-	<0.02	-	<0.1	0.02	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<										

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	-	<0.01	0.04	0.29	0.33	0.33	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	22 Jun 2020	0908_QC100_200622	Interlab D	NSW 0908 PFASMGMT	On-base	-	-	<0.01	0.04	0.26	0.3	0.33	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	-	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05		
MW108S	30 Sep 2020	0908_MW108S_200930	Normal	NSW 0908 PFASMGMT	On-base	-	-	<0.01	0.06	0.15	0.21	0.21	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW108S	17 Nov 2020	0908_MW108 S_201117	Normal	NSW 0908 PFASOMP	On-base	-	-	<0.01	0.03	0.31	0.34	0.34	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	13 Jan 2021	0908_MW108 S_210113	Normal	NSW 0908 PFASMGMT	On-base	-	-	0.03	0.09	0.82	0.91	1	-	<0.02	<0.02	0.06	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	13 Jan 2021	0908_QC101_210113	Field D	NSW 0908 PFASMGMT	On-base	-	-	0.03	0.08	0.77	0.85	0.93	-	<0.02	<0.02	0.05	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	13 Jan 2021	0908_QC201_210113	Interlab D	NSW 0908 PFASMGMT	On-base	-	-	<0.01	0.034	0.61	0.644	-	-	<0.01	<0.01	0.017	<0.01	<0.01	<0.02	-	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05		
MW108S	17 May 2021	0908_MW108S_210517	Normal	NSW 0908 PFASOMP	On-base	-	-	0.06	0.12	0.72	0.84	1.19	-	0.03	0.05	0.14	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	23 Jun 2021	0908_MW108S_210623	Normal	NSW 0908 PFASMGMT	On-base	-	-	0.08	0.13	0.88	1.01	1.41	-	0.03	0.04	0.18	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	05 Nov 2021	0908_MW108S_211105	Normal	NSW 0908 PFASMGMT	On-base	-	-	0.02	0.1	0.91	1.01	1.21	-	0.03	0.04	0.05	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	05 Nov 2021	0908_QC101_211105	Field D	NSW 0908 PFASMGMT	On-base	-	-	0.02	0.1	0.9	1	1.19	-	0.03	0.04	0.04	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	10 Nov 2021	0908_MW108S_211110	Normal	NSW 0908 PFASOMP	On-base	-	-	0.02	0.09	0.7	0.79	0.95	-	0.03	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	10 Nov 2021	0908_QC203_211110	Interlab D	NSW 0908 PFASOMP	On-base	-	-	<0.01	0.08	0.75	0.82	0.98	-	0.02	0.03	0.04	-	<0.02	-	<0.02	<0.02	0.05	0.01	<0.01	<0.01	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5		
MW108S	12 Jan 2022	0908_MW108S_220112	Normal	NSW 0908 PFASMGMT	On-base	-	-	0.05	0.08	1.07	1.15	1.31	-	<0.02	0.03	0.05	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	14 Mar 2022	0908_MW108S_220314	Normal	NSW 0908 PFASMGMT	On-base	-	-	0.04	0.1	0.62	0.72	0.8	-	<0.02	<0.02	0.04	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	19 May 2022	0908_MW108S_220519	Normal	NSW 0908 PFASOMP	On-base	-	-	0.03	0.83	0.62	1.45	1.59	-	<0.02	<0.02	0.11	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	20 Jun 2022	0908_MW108S_220620	Normal	NSW 0908 PFASMGMT	On-base	-	-	0.03	0.92	0.6	1.52	1.75	-	<0.02	<0.02	0.17	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	12 Sep 2022	0908_MW108S_220912	Normal	NSW 0908 PFASMGMT	On-base	-	-	0.04	2.02	0.61	2.63	2.88	-	<0.02	0.03	0.14	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	10 Nov 2022	0908_MW108S_221110	Normal	NSW 0908 PFASOMP	On-base	-	-	0.04	1.66	0.55	2.21	2.48	-	0.02	0.04	0.13	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	10 May 2023	0908_MW108S_230510	Normal	NSW 0908 PFASOMP_23	On-base	-	-	0.42	4.03	2.86	6.89	8.7	-	0.05	0.11	0.88	-	<0.02	-	<0.1	<0.02	0.04	0.27	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	22 Nov 2023	0908_MW108S_231122	Normal	NSW 0908 PFASOMP_23	On-base	-	-	0.23	4.68	1.46	6.14	7.39	-	0.03	0.05	0.78	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	17 Apr 2024	0908_MW108S_240417	Normal	NSW 0908 PFASOMP_24	On-base	-	-	0.01	2.06	0.14	2.2	2.24	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	24 Sep 2024	0908_MW108S_240924	Normal	NSW 0908 PFASOMP_24	On-base	-	-	0.02	2.69	0.26	2.95	3.17	-	<0.02	<0.02	0.05	-	<0.02	-	<0.1	0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.1	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW108S	04 Apr 2025	0908_MW108S_250404	Normal	NSW 0908 PFASOMP_25	On-base	-	-	<0.01	0.29	0.15	0.44	0.47	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW109D	17 Nov 2014	MW109-D_17112014	Normal	NSW 0908 PFAS	On-base	-	-	0.83	44	7.5	51.5	-	-	0.95	-	-	-	0.11	-	-	0.28	2.2	0.34	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	-	<0.05	<0.05	-	-	<0.05	-	-		
MW109D	02 Feb 2016	MW109D_02022016	Normal	NSW 0908 PFAS	On-base	-	-	0.67	24.5	-	24.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-			
MW109D	29 Aug 2016	MW109D_290816	Normal	NSW 0908 PFAS	On-base	-	-	0.42	34	3.9	37.9	-	-	0.32	-	-	-	0.02	-	-	0.11	0.18	1.4	0.18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-	
MW109D	19 Oct 2016	MW109D_191016	Normal	NSW 0908 PFAS	On-base	-	-	0.34	15	1.6	16.6	-	-	0.4	-	-	-	<0.01	-	-	0.12	0.16	1.1	0.13	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	-
MW109D	12 Jan 2017	MW109D_120117	Normal	ACTNSW_Hist_202012-3	On-base	-	-	0.49	35	4	39	-	-	0.33	-	-	-	0.05	-	-	0.12	0.17	1.3	0.16	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	-	<0.05	-	<0.05	-	-	<0.05	-	-	
MW109D	24 Jan 2017	MW109D_GW_24012017	Normal	NSW 0908 PFAS	On-base	-	-	0.89	49.4	7.29	56.69	61.9	-	0.48	0.6	0.78	-	0.09	-	<0.1	0.32	1.74	0.31	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW109D	24 Jan 2017	MW109D_GW_24012017	Normal	NSW 0908 PFAS	On-base	-	-	-	-	-	56.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW109D	02 May 2017	MW10																																								

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMRC 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW118	17 May 2022	0908_QC100_220517	Field_D	NSW_0908_PFA5OMP	Broader Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW118	07 Nov 2022	0908_MW118_221107	Normal	NSW_0908_PFA5OMP	Broader Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW118	28 Nov 2023	0908_MW118_231128	Normal	NSW_0908_PFA5OMP_23	Broader Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW118	28 Nov 2023	0908_QC214_231128	Interlab_D	NSW_0908_PFA5OMP_23	Broader Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW118	16 Apr 2024	0908_MW118_240416	Normal	NSW_0908_PFA5OMP_24	Broader Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW118	03 Apr 2025	0908_MW118_250403	Normal	NSW_0908_PFA5OMP_25	Broader Management Zone	Risk Zone B	<0.002	<0.002	0.004	0.004	0.004	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW121	13 Nov 2014	MW121_13112014	Normal	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-	
MW121	25 Jan 2016	MW121_25012016	Normal	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	
MW121	10 Jan 2017	MW121_GW_10012017	Normal	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	26 Mar 2018	QC201_GW_26032018	Interlab_D	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.02	<0.01	<0.03	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05
MW121	28 Mar 2018	MW121_GW_28032018	Normal	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	28 Mar 2018	QC101_GW_28032018	Field_D	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	20 Nov 2018	0908_MW121_181120	Normal	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	23 May 2019	0908_MW121_190523	Normal	NSW_0908_PFA5	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	04 Nov 2019	0908_MW121_191104	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	18 May 2020	0908_MW121_200518	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	23 Nov 2020	0908_MW121_201123	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	0.15	0.17	0.32	0.39	-	0.03	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	13 May 2021	0908_MW121_210513	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	0.04	0.03	0.07	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	09 Nov 2021	0908_MW121_211109	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	18 May 2022	0908_MW121_220518	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	0.16	0.04	0.2	0.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	08 Nov 2022	0908_MW121_221108	Normal	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	08 Nov 2022	0908_QC110_221108	Field_D	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	0.02	0.01	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	08 Nov 2022	0908_QC210_221108	Interlab_D	NSW_0908_PFA5OMP	Secondary Management Zone	Risk Zone B	<0.01	0.02	<0.01	0.02	0.02	-	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW121	09 May 2023	0908_MW121_230509	Normal	NSW_0908_PFA5OMP_23	Secondary Management Zone	Risk Zone B	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	09 May 2023	0908_QC106_230509	Field_D	NSW_0908_PFA5OMP_23	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW121	09 May 2023	0908_QC206_230509	Interlab_D	NSW_0908_PFA5OMP_23	Secondary Management Zone	Risk Zone B	<0.01	0.01	<0.01	0.01	0.01	-	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW121	20 Nov 2023	0908_MW121_231120	Normal	NSW_0908_PFA5OMP_23	Secondary Management Zone	Risk Zone B	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02																									

MW123	Date	Field ID	Sample Type	Project ID	On-bay/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMC 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.53	8.44	8.7	17.1	23.2	-	0.97	1.16	0.7	-	<0.02	-	<0.1	0.33	2.08	0.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	13 May 2020	0908 MW126S 200513	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.53	8.44	8.7	17.1	23.2	-	0.97	1.16	0.7	-	<0.02	-	<0.1	0.33	2.08	0.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	13 May 2020	0908 QC102 200513	Field D	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.56	9.2	8.52	17.7	24	-	0.93	1.34	0.79	-	<0.02	-	<0.1	0.31	1.97	0.34	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	13 May 2020	0908 QC202 200513	Interlab D	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.32	5.3	6	11.3	-	-	0.75	0.76	0.35	<0.01	<0.01	<0.02	0.17	0.27	1.3	0.18	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05
MW126S	24 Nov 2020	0908 MW126 S 201124	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.54	9.88	6.73	16.6	22.8	-	0.89	1.12	0.87	-	<0.02	-	0.2	0.33	1.96	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	19 May 2021	0908 MW126S 210519	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.4	10.2	7.3	17.5	22.5	-	0.66	0.86	0.81	-	<0.02	-	0.1	0.24	1.72	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	09 Nov 2021	0908 MW126S 211109	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.25	6.08	6.26	12.3	15.8	-	0.52	0.45	0.43	-	<0.02	-	<0.1	0.18	1.5	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	31 May 2022	0908 MW126S 220531	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.28	6.02	5.03	11	14.4	-	0.37	0.47	0.61	-	<0.02	-	0.1	0.14	1.25	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	09 Nov 2022	0908 MW126S 221109	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone A	0.45	7.02	10.3	17.3	23.6	-	0.7	0.85	0.79	-	<0.02	-	0.2	0.38	2.61	0.31	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	11 May 2023	0908 MW126S 230511	Normal	NSW 0908 PFASOMP 23	Primary Management Zone	Risk Zone A	0.68	7.94	13.1	21	28	-	0.93	0.55	0.51	-	<0.02	-	0.2	0.47	3.25	0.39	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	11 May 2023	0908 QC112 230511	Field D	NSW 0908 PFASOMP 23	Primary Management Zone	Risk Zone A	0.54	7.4	13.3	20.7	28.1	-	0.98	0.93	1.07	-	<0.02	-	0.2	0.49	2.81	0.34	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	11 May 2023	0908 QC212 230511	Interlab D	NSW 0908 PFASOMP 23	Primary Management Zone	Risk Zone A	0.52	7	16	23	30	-	0.84	0.94	1.3	-	<0.02	-	0.25	0.41	2.9	0.35	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5		
MW126S	23 Nov 2023	0908 MW126S 231123	Normal	NSW 0908 PFASOMP 23	Primary Management Zone	Risk Zone A	0.35	4.25	7.06	11.3	15.6	-	0.55	0.72	0.8	-	<0.02	-	0.1	0.23	1.31	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	16 Apr 2024	0908 MW126S 240416	Normal	NSW 0908 PFASOMP 24	Primary Management Zone	Risk Zone A	0.16	2.57	3.54	6.11	8.24	-	0.26	0.3	0.38	-	<0.02	-	<0.1	0.12	0.68	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	16 Apr 2024	0908 QC104 240416	Field D	NSW 0908 PFASOMP 24	Primary Management Zone	Risk Zone A	0.13	3.25	3.38	6.63	8.68	-	0.25	0.27	0.43	-	<0.02	-	<0.1	0.08	0.66	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	16 Apr 2024	0908 QC204 240416	Interlab D	NSW 0908 PFASOMP 24	Primary Management Zone	Risk Zone A	0.17	2.8	3.4	6.2	8.3	-	0.27	0.28	0.37	-	<0.02	-	0.07	0.1	0.74	0.09	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5		
MW126S	23 Sep 2024	0908 MW126S 240923	Normal	NSW 0908 PFASOMP 24	Primary Management Zone	Risk Zone A	0.28	4.74	5.56	10.3	13.9	-	0.45	0.52	0.6	-	<0.02	-	0.1	0.18	1.03	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW126S	03 Apr 2025	0908 MW126S 250403	Normal	NSW 0908 PFASOMP 25	Primary Management Zone	Risk Zone A	0.18	3.93	2.62	6.55	8.5	0.15	0.22	0.23	0.36	<0.02	<0.02	<0.05	<0.1	0.1	0.63	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW128D	27 Jan 2016	MW128D 27012016	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	<0.02	<0.02	<0.05	<0.1	0.1	0.63	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW128D	11 Jan 2017	MW128D GW 11012017	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW128D	10 Apr 2018	MW128D GW 10042018	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW128D	26 Nov 2018	0908 MW128D 181126	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12			
MW128D	27 May 2019	0908 MW128D 190527	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW128D	01 Nov 2019	0908 MW128D 191101	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW128D	18 May 2020	0908 MW128D 200518	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW128D	25 Nov 2020	0908 MW128 D 201125	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW128D	20 May 2021	0908 MW128D 210520	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW128D	20 May 2021	0908 QC110 210520	Field D	NSW 09																																					

[illegible]

Location	Date	Field ID	Sample Type	Project ID	On-/Secondary/Management Zone	Risk Zone	Risk Score																																	
MW1321	22 Apr 2024	0908 MW132S 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.18	0.05	0.23	0.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW1321	26 Sep 2024	0908 MW132I 240926	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.22	0.04	0.26	0.26	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW1321	10 Apr 2025	0908 MW132I 250410	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	0.18	0.03	0.21	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW134D	13 Apr 2015	MW134-D 20150413	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	-	-	<0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.13	0.03	-	<0.05	<0.05	-	<0.05	-	-		
MW134D	04 Feb 2016	MW134D 04022016	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	
MW134D	04 Feb 2016	QC127 WG 04022016	Field_D	NSW 0908 PFAS	On-base	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	
MW134D	05 Sep 2016	MW134D 050916	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.07	<0.01	0.07	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	<0.05	-	-	
MW134D	19 Oct 2016	MW134D 191016	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.2	0.05	0.25	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	
MW134D	18 Jan 2017	MW134D 180117	Normal	ACTNSW Hist 202012-3	On-base	-	<0.01	0.1	0.02	0.12	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	
MW134D	18 Jan 2017	QC108 180117	Field_D	ACTNSW Hist 202012-3	On-base	-	<0.01	0.08	0.02	0.1	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	
MW134D	25 Jan 2017	MW134D GW 25012017	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.17	0.1	0.27	0.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW134D	09 May 2017	MW134D 090517	Normal	ACTNSW Hist 202012-3	On-base	-	<0.01	0.05	0.02	0.07	-	-	<0.02	<0.01	0.01	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	0.02	0.02	0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	
MW134D	19 Apr 2018	MW134D GW 19042018	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.08	0.06	0.14	0.14	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	30 Nov 2018	0908 MW134D 181130	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.04	0.07	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	29 May 2019	0908 MW134D 190529	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.06	0.04	0.1	0.13	-	0.03	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	07 Nov 2019	0908 MW134D 191107	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW134D	15 May 2020	0908 MW134D 200515	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW134D	07 Dec 2020	0908 MW134 D 201207	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW134D	24 May 2021	0908 MW134D 210524	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.04	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	18 Nov 2021	0908 MW134D 211118	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	0.01	0.02	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	30 May 2022	0908 MW134D 220530	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	0.02	0.03	0.05	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	14 Nov 2022	0908 MW134D 221114	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	0.02	0.04	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	12 May 2023	0908 MW134D 230512	Normal	NSW 0908 PFASOMP 23	On-base	-	<0.01	0.02	0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	12 May 2023	0908 QC114 230512	Field_D	NSW 0908 PFASOMP 23	On-base	-	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	12 May 2023	0908 QC214 230512	Interlab_D	NSW 0908 PFASOMP 23	On-base	-	<0.01	0.01	0.02	0.03	0.03	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW134D	22 Nov 2023	0908 MW134D 231122	Normal	NSW 0908 PFASOMP 23	On-base	-	<0.01	<0.01	0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW134D	17 Apr 2024	0908 MW134D 240417	Normal	NSW 0908 PFASOMP 24	On-base	-	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW134D	11 Apr 2025	0908 MW134D 250411	Normal	NSW 0908 PFASOMP 25	On-base	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	11 Apr 2025	0908 QC116 250411	Field_D	NSW 0908 PFASOMP 25	On-base	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW134D	11 Apr 2025	0908 QC216 250411	Interlab_D	NSW 0908 PFASOMP 25	On-base	-	<0.01	<0.01	0.01	0.01	0.01	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW134I	13 Apr 2015	MW134-I 20150413	Normal	NSW 0908 PFAS	On-base	-	0.01	<0.01	0.04	0.04	-	-	<0.01	-	-	-	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	0.01	<0.01	<0.05	0.01	-	<0.05	<0.05	-	<0.05				

Location	Date	Field ID	Sample Type	Project ID	On-bat/Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	28 Nov 2018	0908 MW139 181128	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	28 Nov 2018	0908 QC106 181128	Field D	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	28 Nov 2018	0908 QC203 181128	Interlab D	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.02	<0.01	<0.03	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02
MW139	04 Jun 2019	0908 MW139 190604	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	08 Nov 2019	0908 MW139 191108	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	26 May 2020	0908 MW139 200526	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	12 May 2021	0908 MW139 210512	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	31 May 2022	0908 MW139 220531	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	14 Nov 2022	0908 MW139 221114	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	15 May 2023	0908 MW139 230515	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	27 Nov 2023	0908 MW139 231127	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	23 Apr 2024	0908 MW139 240423	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	19 Sep 2024	0908 MW139 240919	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW139	14 Apr 2025	0908 MW139 250414	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	<0.002	0.002	0.002	0.004	0.004	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW142D	04 Mar 2016	MW142D 04032016	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.5	-	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	
MW142D	02 Feb 2017	MW142D GW 02022017	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	
MW142D	10 Jun 2025	0908 MW142D 250610	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	<0.002	0.004	<0.002	0.004	-	-	<0.002	-	-	-	-	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW142S	04 Mar 2016	MW142S 04032016	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.5	-	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05		
MW142S	02 Feb 2017	MW142S GW 02022017	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05		
MW142S	10 Jun 2025	0908 MW142S 250610	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	<0.002	0.007	<0.002	0.007	-	-	<0.002	-	-	-	-	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
MW144	04 Mar 2016	MW144 04032016	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.5	-	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05		
MW144	02 Feb 2017	MW144 GW 02022017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05		
MW144	02 Feb 2017	QC724 GW 02022017	Field D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05		
MW144	27 May 2025	0908 MW144 250527	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	0.069	0.017	0.086	0.086	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW146AD	07 Feb 2017	MW146D A GW 07022017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	20 Nov 2018	0908 MW146D A 181120	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	21 May 2019	0908 MW146D A 190521	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	06 Nov 2019	0908 MW146D A 191106	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	26 Nov 2020	0908 MW146D A 201126	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01																													

Cat	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</
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Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone		0.043	0.16	0.36	0.52	-	-	-	0.014	0.016	0.064	<0.01	<0.01	<0.02	<0.05	<0.02	0.066	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
MW171S	23 Jun 2020	0908_QC201_200623	Interlab D	NSW 0908_PFA5MGMT	On-base	-	-	0.043	0.16	0.36	0.52	-	-	-	0.014	0.016	0.064	<0.01	<0.01	<0.02	<0.05	<0.02	0.066	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05 <td><0.02</td> <td><0.01</td> <td><0.05</td>	<0.02	<0.01	<0.05	
MW171S	30 Sep 2020	0908_QC100_200930	Field D	NSW 0908_PFA5MGMT	On-base	-	-	0.03	0.31	0.46	0.77	1	-	-	0.03	0.05	0.07	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	30 Sep 2020	0908_QC200_200930	Interlab D	NSW 0908_PFA5MGMT	On-base	-	-	0.04	0.46	0.66	1.12	1.44	-	-	0.05	0.07	0.09	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	30 Sep 2020	0908_QC200_200930	Interlab D	NSW 0908_PFA5MGMT	On-base	-	-	0.031	0.23	0.43	0.66	-	-	-	0.035	0.042	0.045	<0.01	<0.01	<0.02	<0.05	<0.02	0.047	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
MW171S	13 Jan 2021	0908_MW171_S_210113	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.03	0.72	0.25	0.97	1.16	-	-	0.02	0.05	0.07	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	26 Mar 2021	0908_MW171_S_210326	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.03	0.31	0.18	0.49	0.62	-	-	0.03	0.03	0.04	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	17 May 2021	0908_MW171S_210517	Normal	NSW 0908_PFA5OMP	On-base	-	-	0.06	0.66	0.39	1.05	1.42	-	-	0.03	0.03	0.09	-	<0.02	-	<0.1	0.02	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	24 Jun 2021	0908_MW171S_210624	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.06	0.48	0.28	0.76	1	-	-	<0.02	<0.02	0.07	-	<0.02	-	<0.1	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	24 Sep 2021	0908_MW171S_210924	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.11	0.73	0.25	0.98	1.26	-	-	<0.02	<0.02	0.11	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW171S	24 Sep 2021	0908_QC201_210924	Interlab D	NSW 0908_PFA5MGMT	On-base	-	-	0.12	0.82	0.24	1.1	1.4	-	-	<0.01	0.01	0.12	-	<0.02	-	<0.02	<0.02	0.06	0.02	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.05	
MW171S	12 Jan 2022	0908_MW171S_220112	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.15	0.65	0.43	1.08	1.37	-	-	<0.02	<0.02	0.12	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	12 Jan 2022	0908_QC100_220112	Field D	NSW 0908_PFA5MGMT	On-base	-	-	0.16	0.65	0.45	1.1	1.42	-	-	<0.02	<0.02	0.13	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171S	12 Jan 2022	0908_QC200_220112	Interlab D	NSW 0908_PFA5MGMT	On-base	-	-	0.13	0.48	0.44	0.92	1.2	-	-	<0.01	0.02	0.1	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW171S	14 Mar 2022	0908_MW171S_220314	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.14	0.76	0.47	1.23	1.59	-	-	<0.02	0.04	0.15	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	14 Mar 2022	0908_QC100_220314	Field D	NSW 0908_PFA5MGMT	On-base	-	-	0.12	0.69	0.45	1.14	1.45	-	-	<0.02	0.03	0.14	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	14 Mar 2022	0908_QC200_220314	Interlab D	NSW 0908_PFA5MGMT	On-base	-	-	0.13	0.66	0.52	1.2	1.5	-	-	0.01	0.03	0.15	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW171S	19 May 2022	0908_MW171S_220519	Normal	NSW 0908_PFA5OMP	On-base	-	-	0.09	0.87	0.58	1.45	1.82	-	-	0.02	0.03	0.19	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	21 Jun 2022	0908_MW171S_220621	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.08	1.49	0.65	2.14	2.55	-	-	<0.02	0.03	0.26	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	21 Jun 2022	0908_QC201_220621	Interlab D	NSW 0908_PFA5MGMT	On-base	-	-	0.08	1.9	0.53	2.4	2.8	-	-	0.01	0.03	0.24	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW171S	12 Sep 2022	0908_MW171S_220912	Normal	NSW 0908_PFA5MGMT	On-base	-	-	0.06	1.16	0.8	1.96	2.41	-	-	0.03	0.06	0.17	-	<0.02	-	<0.1	0.03	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	12 Sep 2022	0908_QC100_220912	Field D	NSW 0908_PFA5MGMT	On-base	-	-	0.05	1.21	0.84	2.05	2.46	-	-	0.03	0.06	0.16	-	<0.02	-	<0.1	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	10 May 2023	0908_MW171S_230510	Normal	NSW 0908_PFA5OMP_23	On-base	-	-	0.07	0.63	0.79	1.42	1.83	-	-	0.04	0.06	0.15	-	<0.02	-	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	17 Apr 2024	0908_MW171S_240417	Normal	NSW 0908_PFA5OMP_24	On-base	-	-	0.04	0.46	0.61	1.07	1.43	-	-	0.03	0.04	0.21	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171S	04 Apr 2025	0908_MW171S_250404	Normal	NSW 0908_PFA5OMP_25	On-base	-	-	0.06	0.65	1.25	1.9	2.34	<0.02	-	0.04	0.05	0.19	<0.02	<0.02	<0.05	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	14 Jan 2016	MW172_14012016	Normal	NSW 0908_PFA5	On-base	-	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-		
MW172	14 Jan 2016	QC102_WG_14012016	Field D	NSW 0908_PFA5	On-base	-	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-			
MW172	02 Sep 2016	MW172_020916	Normal	NSW 0908_PFA5	On-base	-	-	<0.01	0.1	0.03	0.13	-	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	
MW172	12 Oct 2016	MW172_121016	Normal	NSW 0908_PFA5	On-base	-	-	<0.01	0.05	0.02	0.07	-	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	-	<0.05	-	<0.05	-	<0.05	-	
MW172	16 Jan 2017	MW172_160117	Normal	ACTNSW_Hist_202012-3	On-base	-	-	<0.01	0.03	0.03	0.06	-	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone		0.03	0.05	1.06	1.11	1.34	-	0.02	0.04	<0.02	-	<0.02	-	<0.1	0.04	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	13 Sep 2022	0908 MW172 220913	Normal	NSW 0908 PFASMGMT	On-base	-		0.01	0.02	0.48	0.5	0.69	-	0.03	0.04	<0.02	-	<0.02	-	<0.1	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW172	10 Nov 2022	0908 QC105 221110	Field_D	NSW 0908 PFASOMP	On-base	-		0.01	0.04	0.54	0.58	0.78	-	0.03	0.05	<0.02	-	<0.02	-	<0.1	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW172	10 Nov 2022	0908 QC205 221110	Interlab_D	NSW 0908 PFASOMP	On-base	-		<0.01	0.02	0.42	0.44	0.59	-	0.03	0.04	<0.01	-	<0.02	-	<0.02	0.02	0.06	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW172	10 May 2023	0908 MW172 230510	Normal	NSW 0908 PFASOMP 23	On-base	-		0.03	0.07	0.92	0.99	1.92	-	0.05	0.08	<0.02	-	<0.02	-	0.2	0.44	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW172	22 Nov 2023	0908 MW172 231122	Normal	NSW 0908 PFASOMP 23	On-base	-		0.03	0.04	0.45	0.49	0.94	-	0.11	0.15	<0.02	-	<0.02	-	<0.1	<0.02	0.12	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW172	17 Apr 2024	0908 MW172 240417	Normal	NSW 0908 PFASOMP 24	On-base	-		0.02	0.03	0.69	0.72	1.23	-	0.14	0.2	<0.02	-	<0.02	-	<0.1	<0.02	0.09	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW172	24 Sep 2024	0908 MW172 240924	Normal	NSW 0908 PFASOMP 24	On-base	-		0.08	0.03	4.28	4.31	5.27	-	0.25	0.45	<0.02	-	<0.02	-	<0.1	0.02	0.08	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW172	01 Apr 2025	0908 MW172 250401	Normal	NSW 0908 PFASOMP 25	On-base	-		0.03	0.03	2.87	2.9	3.58	0.03	0.18	0.32	<0.02	<0.02	<0.02	<0.05	<0.1	0.02	0.08	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW175D	15 Jan 2016	MW175D 15012016	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.04	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	
MW175D	29 Aug 2016	MW175D 290816	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.33	0.09	0.42	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	<0.05	-	-	
MW175D	19 Oct 2016	MW175D 191016	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.67	0.09	0.76	-	-	<0.01	-	-	-	<0.01	-	-	<0.05	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	-	
MW175D	19 Dec 2016	MW175D_GW_19122016	Normal	NSW 0908 PFAS	On-base	-		0.02	3.01	0.19	3.2	3.29	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	20 Dec 2016	MW175D_GW_20122016	Normal	NSW 0908 PFAS	On-base	-		0.02	3.01	0.19	3.2	3.29	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	12 Jan 2017	MW175D 120117	Normal	ACTNSW_Hist_202012-3	On-base	-		0.02	2.6	0.21	2.81	-	-	0.02	-	-	-	<0.01	-	<0.05	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-		
MW175D	24 Jan 2017	MW175D_GW_24012017	Normal	NSW 0908 PFAS	On-base	-		0.09	3.49	0.76	4.25	4.81	-	0.06	0.08	0.09	-	<0.02	-	<0.1	0.04	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	24 Jan 2017	QC717_24012017	Field_D	NSW 0908 PFAS	On-base	-		0.08	3.8	0.71	4.51	5.05	-	0.06	0.08	0.08	-	<0.02	-	<0.1	0.04	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	02 May 2017	MW175D 020517	Normal	ACTNSW_Hist_202012-3	On-base	-		0.03	1.4	0.33	1.73	-	-	0.02	0.03	0.04	-	<0.01	-	<0.05	0.01	0.08	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW175D	20 Apr 2018	MW175D_GW_20042018	Normal	NSW 0908 PFAS	On-base	-		0.05	2.5	0.43	2.93	3.23	-	0.03	0.04	0.05	-	<0.02	-	<0.1	<0.02	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	14 Sep 2018	0908 MW175D 180914	Normal	NSW 0908 PFASMGMT	On-base	-		0.2	8.67	1.77	10.4	12	-	0.13	0.16	0.22	-	<0.02	-	<0.1	0.09	0.67	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	29 Nov 2018	0908 MW175D 181129	Normal	NSW 0908 PFAS	On-base	-		0.08	4.43	0.77	5.2	5.75	-	0.06	0.07	0.06	-	<0.02	-	<0.1	0.04	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	31 May 2019	0908 MW175D 190531	Normal	NSW 0908 PFAS	On-base	-		0.08	8.3	0.6	8.9	9.43	-	0.05	0.06	0.08	-	<0.02	-	<0.1	0.04	0.19	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	08 Nov 2019	0908 MW175D 191108	Normal	NSW 0908 PFASOMP	On-base	-		0.06	2	0.65	2.65	3.25	-	0.08	0.09	0.05	-	<0.02	-	<0.1	0.05	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	11 May 2020	0908 MW175D 200511	Normal	NSW 0908 PFASOMP	On-base	-		0.1	4.07	0.83	4.9	5.74	-	0.06	0.1	0.09	-	<0.02	-	<0.1	0.06	0.3	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.1	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	17 Nov 2020	0908 MW175 D 201117	Normal	NSW 0908 PFASOMP	On-base	-		0.06	3.99	0.64	4.63	5.16	-	0.05	0.06	0.06	-	<0.02	-	<0.1	0.05	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	17 May 2021	0908 MW175D 210517	Normal	NSW 0908 PFASOMP	On-base	-		0.04	1.24	0.46	1.7	2.11	-	0.05	0.07	0.03	-	<0.02	-	<0.1	0.02	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	16 Nov 2021	0908 MW175D 211116	Normal	NSW 0908 PFASOMP	On-base	-		0.03	2.1	0.4	2.5	2.89	-	0.05	0.05	0.03	-	<0.02	-	<0.1	0.03	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	16 Nov 2021	0908 QC108 211116	Field_D	NSW 0908 PFASOMP	On-base	-		0.04	2.4	0.44	2.84	3.27	-	0.05	0.05	0.03	-	<0.02	-	<0.1	0.04	0.2	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	19 May 2022	0908 MW175D 220519	Normal	NSW 0908 PFASOMP	On-base	-		0.05	3.45	0.76	4.21	4.81	-	0.06	0.08	0.04	-	<0.02	-	<0.1	0.08	0.26	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	10 Nov 2022	0908 MW175D 221110	Normal	NSW 0908 PFASOMP	On-base	-		0.07	4.43	1.13	5.56	6.31	-	0.07	0.13	0.07	-	<0.02	-	<0.1	0.08	0.29	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	10 May 2023	0908 MW175D 230510	Normal	NSW 0908 PFASOMP 23	On-base	-		0.07	4.61	1.05	5.66	6.32	-	0.07	0.1	0.04	-	<0.02	-	<0.1	0.07	0.27	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW175D	10 May 2023	0908 QC119 230510	Field_D	NSW 0908 PFASOMP 23	On-base	-		0.08	4.13	1.13	5.26	6.18	-	0.12	0.12	0.08	-	<0.02	-	<0.1	0.12	0.35	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<												

Accitation	Date	Field ID	Sample Type	Project ID	On-Base/Management Zone	Risk Zone	-	-	-	0.57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-</
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[illegible]

[illegible]

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone		<0.01	0.12	0.1	0.22	0.24	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202D	19 May 2022	0908 MW202D 220519	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.11	0.05	0.16	0.16	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	
MW202D	19 May 2022	0908 QC212 220519	Interlab D	NSW 0908 PFASOMP	On-base	-		<0.01	0.11	0.05	0.16	0.16	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	
MW202D	10 Nov 2022	0908 MW202D 221110	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.14	0.09	0.23	0.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202D	10 May 2023	0908 MW202D 230510	Normal	NSW 0908 PFASOMP 23	On-base	-		0.02	0.52	0.41	0.93	1.14	-	0.03	0.04	0.05	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202D	22 Nov 2023	0908 MW202D 231122	Normal	NSW 0908 PFASOMP 23	On-base	-		<0.01	0.13	0.07	0.2	0.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202D	18 Apr 2024	0908 MW202D 240418	Normal	NSW 0908 PFASOMP 24	On-base	-		0.01	0.22	0.33	0.55	0.7	-	0.03	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202D	01 Apr 2025	0908 MW202D 250401	Normal	NSW 0908 PFASOMP 25	On-base	-		<0.01	0.04	0.02	0.06	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202D	01 Apr 2025	0908 QC100 250401	Field D	NSW 0908 PFASOMP 25	On-base	-		<0.01	0.05	0.03	0.08	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202D	01 Apr 2025	0908 QC200 250401	Interlab D	NSW 0908 PFASOMP 25	On-base	-		<0.01	0.04	0.02	0.06	0.06	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	
MW202S	20 Jan 2016	MW202S 20012016	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.28	-	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-
MW202S	31 Aug 2016	MW202S 310816	Normal	NSW 0908 PFAS	On-base	-		0.02	1	0.43	1.43	-	-	0.01	-	-	-	-	<0.01	-	<0.05	0.02	0.12	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	-	<0.05	-	
MW202S	15 Sep 2016	MW202S 150916	Normal	NSW 0908 PFAS	On-base	-		0.03	0.82	0.37	1.19	-	-	0.019	0.033	0.032	<0.01	<0.01	<0.2	<0.5	0.025	0.073	0.011	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.05	<0.2
MW202S	18 Oct 2016	MW202S 181016	Normal	NSW 0908 PFAS	On-base	-		0.03	1.9	0.55	2.45	-	-	0.02	-	-	-	<0.01	-	<0.05	0.02	1.11	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-		
MW202S	18 Jan 2017	MW202S 180117	Normal	ACTNSW Hist 202012-3	On-base	-		0.03	1.3	0.37	1.67	-	-	0.01	-	-	-	<0.01	-	<0.05	0.02	0.07	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW202S	18 Jan 2017	MW202S GW 18012017	Normal	NSW 0908 PFAS	On-base	-		0.02	0.45	0.23	0.68	0.76	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	18 Jan 2017	QC113 180117	Field D	ACTNSW Hist 202012-3	On-base	-		0.03	0.76	0.2	0.96	-	-	<0.01	-	-	-	<0.01	-	<0.05	0.01	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW202S	15 Feb 2017	MW202S 150217	Normal	ACTNSW Hist 202012-3	On-base	-		0.02	0.53	0.13	0.66	-	-	<0.01	-	-	-	<0.01	-	<0.05	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-
MW202S	15 Feb 2017	MW202S 150217	Normal	NSW 0908 PFAS	On-base	-		0.02	0.53	0.13	0.66	-	-	<0.01	-	-	-	<0.01	-	<0.05	0.01	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-
MW202S	15 Feb 2017	QC118 150217	Field D	ACTNSW Hist 202012-3	On-base	-		0.02	0.6	0.09	0.69	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-
MW202S	05 May 2017	MW202S 050517	Normal	ACTNSW Hist 202012-3	On-base	-		0.02	0.69	0.35	1.04	-	-	0.02	0.03	0.02	<0.01	-	<0.05	0.02	0.06	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MW202S	04 Apr 2018	MW202S GW 04042018	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.15	0.05	0.2	0.3	-	<0.02	<0.02	<0.02	-	<0.02	-	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	22 Nov 2018	0908 MW202S 181122	Normal	NSW 0908 PFAS	On-base	-		<0.01	0.8	0.16	0.96	0.96	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	30 May 2019	0908 MW202S 190530	Normal	NSW 0908 PFAS	On-base	-		0.01	1.38	0.08	1.46	1.47	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	08 Nov 2019	0908 MW202S 191108	Normal	NSW 0908 PFASOMP	On-base	-		0.01	0.81	0.14	0.95	0.96	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	24 May 2021	0908 MW202S 210524	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	0.61	0.3	0.91	0.94	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW202S	10 Nov 2021	0908 MW202S 211110	Normal	NSW 0908 PFASOMP	On-base	-		0.02	0.34	0.11	0.45	0.55	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.03	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	19 May 2022	0908 MW202S 220519	Normal	NSW 0908 PFASOMP	On-base	-		0.01	0.65	0.41	1.06	1.17	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	19 May 2022	0908 QC112 220519	Field D	NSW 0908 PFASOMP	On-base	-		0.01	0.71	0.41	1.12	1.22	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	10 Nov 2022	0908 MW202S 221110	Normal	NSW 0908 PFASOMP	On-base	-		0.02	0.44	0.34	0.78	0.85	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	10 May 2023	0908 MW202S 230510	Normal	NSW 0908 PFASOMP 23	On-base	-		<0.01	0.2	0.1	0.3	0.3	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW202S	22 Nov 2023	0908 MW202S 231122	Normal	NSW 0908 PFASOMP 23	On-base	-		0.02	0.25	0.34	0.59	0.65	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<																	

Catagion	Date	Field ID	Sample Type	Project ID	On-base Management Zone	Risk Zone		<0.01	<0.01	0.03	0.03	0.38	-	0.09	0.03	<0.02	-	<0.02	-	0.1	0.03	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW210D	12 May 2020	0908 MW210D 200512	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	<0.01	0.03	0.03	0.38	-	0.09	0.03	<0.02	-	<0.02	-	0.1	0.03	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW210D	14 May 2021	0908 MW210D 210514	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	<0.01	0.05	0.05	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210D	24 May 2022	0908 MW210D 220524	Normal	NSW 0908 PFASOMP	On-base	-		<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210D	24 May 2022	0908 QC214 220524	Interlab D	NSW 0908 PFASOMP	On-base	-		<0.01	<0.01	0.03	0.03	0.07	-	0.01	0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW210D	08 May 2023	0908 MW210D 230508	Normal	NSW 0908 PFASOMP 23	On-base	-		<0.01	<0.01	0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210D	17 Apr 2024	0908 MW210D 240417	Normal	NSW 0908 PFASOMP 24	On-base	-		<0.01	<0.01	0.02	0.02	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210D	04 Apr 2025	0908 MW210D 250404	Normal	NSW 0908 PFASOMP 25	On-base	-		<0.01	0.02	<0.01	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW210S	18 Jan 2016	MW210S 18012016	Normal	NSW 0908 PFAS	On-base	-		0.19	10.5	2.32	12.82	-	-	0.32	-	-	-	<0.02	-	<0.02	-	0.71	0.12	<0.02	<0.02	<0.05	<0.05	<0.05	<0.5	-	<0.1	<0.1	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5	
MW210S	26 Aug 2016	MW210S 260816	Normal	NSW 0908 PFAS	On-base	-		0.1	15	1.4	16.4	-	-	0.15	-	-	-	<0.01	-	<0.05	0.04	0.55	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	-	-	<0.05	-	-			
MW210S	17 Oct 2016	MW210S 171016	Normal	NSW 0908 PFAS	On-base	-		0.08	19	1.6	20.6	-	-	0.19	-	-	-	<0.01	-	<0.05	0.05	0.59	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	-	<0.05	-	-	<0.05	-		
MW210S	13 Jan 2017	MW210S_GW 13012017	Normal	NSW 0908 PFAS	On-base	-		0.15	15.6	1.24	16.8	17.6	-	0.23	0.09	0.12	-	<0.02	-	<0.1	0.1	0.08	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	13 Jan 2017	MW210S_GW 13012017	Normal	NSW 0908 PFAS	On-base	-		-	-	-	16.84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
MW210S	13 Jan 2017	QC713_GW 13012017	Field D	NSW 0908 PFAS	On-base	-		0.15	15.2	1.43	16.6	17.5	-	0.23	0.12	0.13	-	<0.02	-	<0.1	0.1	0.12	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	13 Jan 2017	QC713_GW 13012017	Field_D	NSW 0908 PFAS	On-base	-		-	-	-	16.63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
MW210S	16 Jan 2017	MW210S 160117	Normal	ACTNSW Hist 202012-3	On-base	-		0.09	8.6	1.6	10.2	-	-	0.18	-	-	-	<0.01	-	<0.05	0.04	0.37	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05		
MW210S	16 Jan 2017	MW210S 160117	Normal	NSW 0908 PFAS	On-base	-		0.09	8.6	1.6	10.2	-	-	0.18	-	-	-	<0.01	-	<0.05	0.04	0.37	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05		
MW210S	08 May 2017	MW210S 080517	Normal	ACTNSW Hist 202012-3	On-base	-		0.15	15	1.8	16.8	-	-	0.21	0.22	0.11	-	<0.01	-	0.06	0.09	0.55	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05		
MW210S	28 May 2019	0908 MW210S 190528	Normal	NSW 0908 PFAS	On-base	-		0.08	17.9	0.7	18.6	19.1	-	0.05	0.06	0.1	-	<0.02	-	<0.1	0.02	0.15	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	12 May 2020	0908 MW210S 200512	Normal	NSW 0908 PFASOMP	On-base	-		0.1	11.4	1.14	12.5	13.4	-	0.11	0.09	0.08	-	<0.02	-	<0.1	0.11	0.32	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	12 May 2020	0908 QC100 200512	Field D	NSW 0908 PFASOMP	On-base	-		0.09	11.6	1.15	12.8	13.6	-	0.1	0.1	0.08	-	<0.02	-	<0.1	0.11	0.33	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	12 May 2020	0908 QC200 200512	Interlab D	NSW 0908 PFASOMP	On-base	-		0.076	11	1.1	12.1	-	-	0.067	0.089	0.065	<0.01	<0.01	<0.02	0.08	0.089	0.29	0.049	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.017	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05		
MW210S	14 May 2021	0908 MW210S 210514	Normal	NSW 0908 PFASOMP	On-base	-		0.03	1.1	0.22	1.32	1.44	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW210S	24 May 2022	0908 MW210S 220524	Normal	NSW 0908 PFASOMP	On-base	-		0.08	1.03	1.78	2.81	4.26	-	0.15	0.17	0.07	-	<0.02	-	0.1	0.09	0.67	0.12	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	24 May 2022	0908 QC114 220524	Field D	NSW 0908 PFASOMP	On-base	-		0.11	1.15	1.98	3.13	4.79	-	0.18	0.2	0.08	-	<0.02	-	0.1	0.13	0.73	0.13	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	08 May 2023	0908 MW210S 230508	Normal	NSW 0908 PFASOMP 23	On-base	-		0.08	8.59	0.89	9.48	10.2	-	0.1	0.1	0.07	-	<0.02	-	<0.1	0.06	0.27	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	17 Apr 2024	0908 MW210S 240417	Normal	NSW 0908 PFASOMP 24	On-base	-		0.08	14.8	0.67	15.5	16.1	-	0.05	0.08	0.09	-	<0.02	-	<0.1	0.04	0.22	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW210S	04 Apr 2025	0908 MW210S 250404	Normal	NSW 0908 PFASOMP 25	On-base	-		0.13	2.54	0.9	3.44	4.9	0.04	0.11	0.12	0.09	<0.02	<0.02	<0.05	0.1	0.14	0.65	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW230S	15 Mar 2017	MW230S_GW 150317	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW230S	15 Mar 2017	QC704 150317	Field D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW230S	03 Jun 2019	0908 MW230S 190603	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW230S	14 Nov 2019	0908 MW230S 191114	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C		<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.0		

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	10 Feb 2017	QC727 GW 10022017	Field D	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
MW232D	10 Apr 2018	MW232D GW 10042018	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.02	<0.12	<0.05	<0.12	<0.05	<0.12	
MW232D	06 Dec 2018	0908 MW232D 181206	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.02	<0.12	<0.05	<0.12	<0.05	<0.12	
MW232D	29 May 2019	0908 MW232D 190529	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.02	<0.12	<0.05	<0.12	<0.05	<0.12	
MW232D	08 Nov 2019	0908 MW232D 191108	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.02	<0.12	<0.05	<0.12	<0.05	<0.12		
MW232D	18 May 2020	0908 MW232D 200518	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW232D	25 Nov 2020	0908 MW232 D 201125	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW232D	12 May 2021	0908 MW232D 210512	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW232D	11 Nov 2021	0908 MW232D 211111	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW232D	11 Nov 2021	0908 QC202 211111	Interlab D	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	18 May 2022	0908 MW232D 220518	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW232D	18 May 2022	0908 QC207 220518	Interlab D	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	08 Nov 2022	0908 MW232D 221108	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	0.18	<0.01	0.18	0.18	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	11 May 2023	0908 MW232D 230511	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	24 Nov 2023	0908 MW232D 231124	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	22 Apr 2024	0908 MW232D 240422	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	20 Sep 2024	0908 MW232D 240920	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232D	03 Apr 2025	0908 MW232D 250403	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005
MW232S	10 Feb 2017	MW232S GW 10022017	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232S	10 Apr 2018	MW232S GW 10042018	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232S	06 Dec 2018	0908 MW232S 181206	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232S	29 May 2019	0908 MW232S 190529	Normal	NSW 0908 PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232S	08 Nov 2019	0908 MW232S 191108	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232S	08 Nov 2019	0908 QC104 191108	Field D	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232S	08 Nov 2019	0908 QC204 191108	Interlab D	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.02	<0.01	<0.02	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05		
MW232S	18 May 2020	0908 MW232S 200518	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW232S	25 Nov 2020	0908 MW232 S 201125	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<																																	

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMR 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	<0.01	0.18	0.18	0.3	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	19 Apr 2018	MW240D_GW_19042018	Normal	NSW_0908_PFAAS	On-base	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW240D	19 Apr 2018	MW240D_GW_19042018	Normal	NSW_0908_PFAAS	On-base	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW240D	19 Apr 2018	QC104_GW_19042018	Field_D	NSW_0908_PFAAS	On-base	-	<0.01	<0.01	0.18	0.18	0.31	-	0.03	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	19 Apr 2018	QC104_GW_19042018	Field_D	NSW_0908_PFAAS	On-base	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW240D	19 Apr 2018	QC204_GW_19042018	Interlab_D	NSW_0908_PFAAS	On-base	-	<0.01	<0.02	0.1	0.12	-	-	0.023	0.022	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	0.035	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05
MW240D	22 Nov 2018	0908_MW240D_181122	Normal	NSW_0908_PFAAS	On-base	-	0.02	<0.01	0.28	0.28	0.48	-	0.04	0.06	<0.02	-	<0.02	-	<0.1	<0.02	0.08	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	22 Nov 2018	0908_MW240D_181122	Normal	NSW_0908_PFAAS	On-base	-	-	-	-	0.29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW240D	23 Jan 2019	0908_MW240D_190123	Normal	NSW_0908_PFAASMGMT	On-base	-	0.03	<0.01	0.45	0.45	0.74	-	0.08	0.07	<0.02	-	<0.02	-	<0.1	<0.02	0.08	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	31 May 2019	0908_MW240D_190531	Normal	NSW_0908_PFAAS	On-base	-	0.06	0.02	0.51	0.53	0.78	-	0.04	0.06	<0.02	-	<0.02	-	<0.1	<0.02	0.07	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	23 Oct 2019	0908_MW240D_191023	Normal	NSW_0908_PFAASMGMT	On-base	-	0.09	0.09	0.55	0.64	0.99	-	0.05	0.06	<0.02	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	07 Nov 2019	0908_MW240D_191107	Normal	NSW_0908_PFAASOMP	On-base	-	0.07	0.02	0.49	0.51	0.71	-	0.04	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	15 May 2020	0908_MW240D_200515	Normal	NSW_0908_PFAASOMP	On-base	-	0.07	0.05	0.51	0.56	0.78	-	0.04	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW240D	16 Nov 2020	0908_MW240_D_201116	Normal	NSW_0908_PFAASOMP	On-base	-	0.04	0.04	0.34	0.38	0.54	-	0.03	0.04	<0.02	-	<0.02	-	<0.10	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	26 May 2022	0908_MW240D_220526	Normal	NSW_0908_PFAASOMP	On-base	-	0.06	0.04	0.4	0.44	0.6	-	0.02	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	26 May 2022	0908_QC215_220526	Interlab_D	NSW_0908_PFAASOMP	On-base	-	0.05	0.03	0.32	0.35	0.5	-	0.02	0.03	0.01	-	<0.02	-	<0.02	<0.02	0.03	0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5		
MW240D	10 Nov 2022	0908_MW240D_221110	Normal	NSW_0908_PFAASOMP	On-base	-	<0.01	<0.01	0.06	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	10 Nov 2022	0908_QC101_221110	Field_D	NSW_0908_PFAASOMP	On-base	-	<0.01	<0.01	0.09	0.09	0.09	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	10 Nov 2022	0908_QC201_221110	Interlab_D	NSW_0908_PFAASOMP	On-base	-	<0.01	<0.01	0.07	0.07	0.07	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5		
MW240D	10 May 2023	0908_MW240D_230510	Normal	NSW_0908_PFAASOMP_23	On-base	-	<0.01	<0.01	0.08	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	22 Nov 2023	0908_MW240D_231122	Normal	NSW_0908_PFAASOMP_23	On-base	-	<0.01	<0.01	0.08	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	17 Apr 2024	0908_MW240D_240417	Normal	NSW_0908_PFAASOMP_24	On-base	-	<0.01	<0.01	0.1	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	25 Sep 2024	0908_MW240D_240925	Normal	NSW_0908_PFAASOMP_24	On-base	-	0.01	<0.01	0.15	0.15	0.19	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	16 Apr 2025	0908_MW240D_250416	Normal	NSW_0908_PFAASOMP_25	On-base	-	<0.01	0.01	0.15	0.16	0.25	<0.02	0.02	0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	16 Apr 2025	0908_QC117_250416	Field_D	NSW_0908_PFAASOMP_25	On-base	-	<0.01	0.01	0.15	0.16	0.24	<0.02	0.02	0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW240D	16 Apr 2025	0908_QC217_250416	Interlab_D	NSW_0908_PFAASOMP_25	On-base	-	<0.01	<0.01	0.13	0.13	0.21	-	0.02	0.02	<0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5		
MW241D	08 Feb 2017	MW241D_GW_08022017	Normal	NSW_0908_PFAAS	Other: West of base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW241D	27 Apr 2018	MW241D_GW_27042018	Normal	NSW_0908_PFAAS	Other: West of base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW241D	27 Nov 2018	0908_MW241D_181127	Normal	NSW_0908_PFAAS	Other: West of base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<																		

[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMR 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	0.6	0.41	1.01	1.08	-	<0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW252S	24 Apr 2024	0908 MW252S 240424	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone B	<0.01	0.6	0.41	1.01	1.08	-	<0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW252S	24 Apr 2024	0908 QC115 240424	Field D	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone B	0.01	0.63	0.47	1.1	1.19	-	<0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW252S	24 Apr 2024	0908 QC215 240424	Interlab D	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone B	0.01	0.59	0.45	1	1.2	-	<0.02	0.03	0.02	-	<0.02	-	<0.02	<0.02	0.05	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW255D	01 Mar 2017	MW255D_GW_010317	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.05	<0.05	<0.05	<0.05	0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12		
MW255D	29 Mar 2018	MW255D_GW_29032018	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	20 Nov 2018	0908 MW255D 181120	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	23 May 2019	0908 MW255D 190523	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	19 May 2020	0908 MW255D 200519	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	13 May 2021	0908 MW255D 210513	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	18 May 2022	0908 MW255D 220518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	09 May 2023	0908 MW255D 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	09 May 2023	0908 QC109 230509	Field D	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	09 May 2023	0908 QC209 230509	Interlab D	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	-	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW255D	16 Apr 2024	0908 MW255D 240416	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	16 Apr 2024	0908 QC106 240416	Field D	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW255D	16 Apr 2024	0908 QC206 240416	Interlab D	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.01	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW255D	03 Apr 2025	0908 MW255D 250403	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone D	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW255D	03 Apr 2025	0908 QC105 250403	Field D	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone D	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW255D	03 Apr 2025	0908 QC205 250403	Interlab D	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone D	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.002	<0.004	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.001	<0.002	<0.002	<0.02	<0.01	<0.05	<0.002	<0.05	<0.1	<0.002	<0.5			
MW255S	01 Mar 2017	MW255S_GW_010317	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW255S	29 Mar 2018	MW255S_GW_29032018	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW255S	20 Nov 2018	0908 MW255S 181120	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW255S	20 Nov 2018	0908 QC101 181120	Field D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW255S	20 Nov 2018	0908 QC200 181120	Interlab D	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.02	<0.01	<0.03	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.014	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05		
MW255S	23 May 2019	0908 MW255S 190523	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone D	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02.																											

Date	Field ID	Sample Type	Project ID	On- / Secondary Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Location	Date	Field ID	Sample Type	Project ID	On-Secondary/Management Zone	Risk Zone		<0.01	0.03	0.01	0.04	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMC 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.04	0.03	0.07	0.1	0.44	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.11	0.11	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW270S	20 Sep 2024	0908 MW270S 240920	Normal	NSW 0908 PFASOMP 24	Broader Management Zone	Risk Zone C	0.004	0.03	0.07	0.1	0.44	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.11	0.11	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW270S	15 Apr 2025	0908 MW270S 250415	Normal	NSW 0908 PFASOMP 25	Broader Management Zone	Risk Zone C	0.005	0.045	0.009	0.054	0.085	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	0.012	0.008	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005
MW271D	15 Mar 2017	MW271D_GW_150317	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	13 Apr 2018	MW271D_GW_13042018	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	28 Nov 2018	0908 MW271D 181128	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	13 Jun 2019	0908 MW271D 190613	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	13 Jun 2019	0908 MW271D 190613	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	08 Nov 2019	0908 MW271D 191108	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	26 May 2020	0908 MW271D 200526	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	13 Nov 2020	0908 MW271 D 201113	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	12 Nov 2021	0908 MW271D 211112	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	16 May 2022	0908 MW271D 220516	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	14 Nov 2022	0908 MW271D 221114	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	15 May 2023	0908 MW271D 230515	Normal	NSW 0908 PFASOMP 23	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	27 Nov 2023	0908 MW271D 231127	Normal	NSW 0908 PFASOMP 23	Primary Management Zone	Risk Zone C	<0.01	<0.01	0.01	0.01	0.04	-	0.03	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	24 Apr 2024	0908 MW271D 240424	Normal	NSW 0908 PFASOMP 24	Primary Management Zone	Risk Zone C	<0.01	0.03	0.02	0.05	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	19 Sep 2024	0908 MW271D 240919	Normal	NSW 0908 PFASOMP 24	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271D	14 Apr 2025	0908 MW271D 250414	Normal	NSW 0908 PFASOMP 25	Primary Management Zone	Risk Zone C	<0.002	0.004	0.002	0.006	0.006	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
MW271S	15 Mar 2017	MW271S_GW_150317	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271S	13 Apr 2018	MW271S_GW_13042018	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271S	28 Nov 2018	0908 MW271S 181128	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271S	13 Jun 2019	0908 MW271S 190613	Normal	NSW 0908 PFAS	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271S	08 Nov 2019	0908 MW271S 191108	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271S	26 May 2020	0908 MW271S 200526	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	0.08	0.08	0.23	-	0.04	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271S	13 Nov 2020	0908 MW271 S 201113	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	<0.01	0.03	0.03	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW271S	12 Nov 2021	0908 MW271S 211112	Normal	NSW 0908 PFASOMP	Primary Management Zone	Risk Zone C	<0.01	0.01	0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0.														

[illegible]

Auction	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.002	0.002	0.009	0.011	0.044	-	<0.002	<0.002	<0.002	-	<0.002	<0.005	0.02	0.007	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW280S	30 Jun 2022	0908 MW280S 220630	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	0.002	0.002	0.009	0.011	0.044	-	<0.002	<0.002	<0.002	-	<0.002	<0.005	0.02	0.007	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW280S	16 Sep 2022	0908 MW280S 220916	Normal	NSW 0908 PFASMGMT	Broader Management Zone	Risk Zone C	<0.002	<0.002	0.006	0.006	0.03	-	<0.002	<0.002	<0.002	-	<0.002	<0.005	0.02	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW280S	11 Nov 2022	0908 MW280S 221111	Normal	NSW 0908 PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.002	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.002	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	18 May 2023	0908 MW280S 230518	Normal	NSW 0908 PFASOMP_23	Broader Management Zone	Risk Zone C	<0.01	<0.01	0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	23 Nov 2023	0908 MW280S 231123	Normal	NSW 0908 PFASOMP_23	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	23 Apr 2024	0908 MW280S 240423	Normal	NSW 0908 PFASOMP_24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	23 Sep 2024	0908 MW280S 240923	Normal	NSW 0908 PFASOMP_24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW280S	09 Apr 2025	0908 MW280S 250409	Normal	NSW 0908 PFASOMP_25	Broader Management Zone	Risk Zone C	<0.002	<0.002	0.006	0.006	0.006	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	-	1	2.27	14	1.52	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW281S	20 Mar 2017	MW281S GW 200317	Normal	NSW 0908 PFAS	On-base	-	4.47	180	64	244	285	-	4.62	4.95	7.78	-	<0.02	-	1	2.27	14	1.52	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	19 Apr 2018	MW281S GW 19042018	Normal	NSW 0908 PFAS	On-base	-	8.75	206	76.9	283	318	-	1.9	3.16	7.35	-	<0.1	-	<0.5	1.27	10.3	1.99	<0.1	<0.1	<0.1	<0.1	<0.1	<0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.25	<0.1	<0.25	<0.25	<0.1	<0.25	
MW281S	19 Apr 2018	MW281S GW 19042018	Normal	NSW 0908 PFAS	On-base	-	-	-	-	282.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW281S	22 Nov 2018	0908 MW281S 181122	Normal	NSW 0908 PFAS	On-base	-	8.01	191	41	232	264	-	1.57	2.23	9.9	-	<0.02	-	0.5	0.92	7.45	1.25	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	22 Nov 2018	0908 QC104 181122	Field D	NSW 0908 PFAS	On-base	-	7.32	186	37.5	224	252	-	1.45	2.03	8.41	-	<0.02	-	0.4	0.83	7.14	1.13	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	22 Nov 2018	0908 QC104 181122	Field D	NSW 0908 PFAS	On-base	-	-	-	-	223.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW281S	31 May 2019	0908 MW281S 190531	Normal	NSW 0908 PFAS	On-base	-	4.94	144	25.4	169	191	-	1.1	1.46	7.46	-	<0.02	-	0.3	0.73	4.43	0.77	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	31 May 2019	0908 MW281S 190531	Normal	NSW 0908 PFAS	On-base	-	-	-	-	169.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW281S	23 Oct 2019	0908 MW281S 191023	Normal	NSW 0908 PFASMGMT	On-base	-	4.44	112	18.8	131	150	-	1	1.69	7.5	-	<0.02	-	0.3	0.62	3.63	0.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	07 Nov 2019	0908 MW281S 191107	Normal	NSW 0908 PFASOMP	On-base	-	4.64	112	19.4	131	152	-	1.12	1.8	7.66	-	<0.02	-	0.3	0.65	3.98	0.58	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	15 May 2020	0908 MW281S 200515	Normal	NSW 0908 PFASOMP	On-base	-	3.84	119	19.8	139	158	-	1.12	1.99	6.64	-	<0.02	-	0.2	0.62	4.13	0.55	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	16 Nov 2020	0908 MW281 S 201116	Normal	NSW 0908 PFASOMP	On-base	-	3.56	26.7	24.3	51	69.9	-	1.09	2.79	6.1	-	<0.02	-	0.3	0.55	3.83	0.64	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	25 May 2021	0908 MW281S 210525	Normal	NSW 0908 PFASOMP	On-base	-	2.19	63.3	26.2	89.5	109	-	2.23	2.84	4.69	-	<0.02	-	0.2	0.78	5.45	0.76	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	10 Nov 2021	0908 MW281S 211110	Normal	NSW 0908 PFASOMP	On-base	-	3.1	234	21.4	255	277	-	1.63	1.9	8.86	-	<0.02	-	0.2	0.53	4.89	0.63	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	26 May 2022	0908 MW281S 220526	Normal	NSW 0908 PFASOMP	On-base	-	2.16	68.6	19.4	88	103	-	1.87	2.32	3.12	-	<0.02	-	0.4	0.67	4.06	0.61	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	10 Nov 2022	0908 MW281S 221110	Normal	NSW 0908 PFASOMP	On-base	-	2.97	41.4	11.5	52.9	60.5	-	0.29	0.44	2.55	-	<0.02	-	<0.1	0.14	0.94	0.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	10 Nov 2022	0908 QC103 221110	Field D	NSW 0908 PFASOMP	On-base	-	3.79	50	12.9	62.9	73.7	-	0.34	0.47	4.61	-	<0.02	-	0.1	0.18	1.06	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	10 Nov 2022	0908 QC203 221110	Interlab D	NSW 0908 PFASOMP	On-base	-	2.8	31	9.6	41	48	-	0.31	0.34	2.4	-	<0.02	-	0.06	0.2	0.9	0.28	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW281S	10 May 2023	0908 MW281S 230510	Normal	NSW 0908 PFASOMP_23	On-base	-	1.67	108	21.8	130	143	-	1.15	1.78	3.7	-	<0.02	-	0.3	0.58	3.41	0.72	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	10 May 2023	0908 QC217 230510	Interlab D	NSW 0908 PFASOMP_23	On-base	-	1.6	73	20	93	110	-	1.1	2.2	2.9	-	<0.02	-	0.33	0.61	3.5	0.68	0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW281S	22 Nov 2023	0908 MW281S 231122	Normal	NSW 0908 PFASOMP_23	On-base	-	2.62	99.8	12.8	113	123	-	0.48	0.57	3.97	-	<0.02	-	0.3	0.36	1.89	0.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	17 Apr 2024	0908 MW281S 240417	Normal	NSW 0908 PFASOMP_24	On-base	-	0.71	22	4.82	26.8	30.5	-	0.27	0.39	1.15	-	<0.02	-	0.1	0.14	0.65	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	25 Sep 2024	0908 MW281S 240925	Normal	NSW 0908 PFASOMP_24	On-base	-	1.43	109	4.07	113	119	-	0.29	0.29	2.32	-	<0.02	-	0.1																					

[illegible]

Catation	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n-2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMRC 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.01	0.62	0.16	0.78	0.99	-	0.05	0.03	<0.02	-	<0.02	-	<0.1	0.04	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	25 Sep 2024	0908 MW344S 240925	Normal	NSW 0908 PFASOMP 24	On-base	Risk Zone B	0.01	0.62	0.16	0.78	0.99	-	0.05	0.03	<0.02	-	<0.02	-	<0.1	0.04	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	25 Sep 2024	0908 QC109 240925	Field D	NSW 0908 PFASOMP 24	On-base	Risk Zone B	0.01	0.54	0.13	0.67	0.87	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	0.04	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	25 Sep 2024	0908 QC209 240925	Interlab D	NSW 0908 PFASOMP 24	On-base	Risk Zone B	0.01	0.53	0.15	0.68	0.89	-	0.04	0.04	0.01	-	<0.02	-	<0.02	0.03	0.06	0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW344S	16 Apr 2025	0908 MW344S 250416	Normal	NSW 0908 PFASOMP 25	On-base	Risk Zone B	<0.01	0.46	0.06	0.52	0.54	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW354S	09 Nov 2020	0908 MW354 201109	Normal	NSW 0908 PFASMGMT	On-base	-	4.07	88.9	31.4	120	153	-	2.04	4.47	9.84	-	<0.02	-	0.7	1.33	8.66	1.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW354S	05 Oct 2023	0908 MW354S 231005	Normal	NSW 0908 PFASMGMT 23	On-base	-	3.21	26.8	13.8	40.6	51	-	0.51	0.77	2.76	-	<0.02	-	0.2	0.32	2.26	0.36	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW354S	14 Nov 2023	0908 MW354S 231114	Normal	NSW 0908 PFASMGMT 23	On-base	-	5.77	47.7	13.1	60.8	75.6	-	0.36	0.74	5.37	-	<0.02	-	0.1	0.28	1.9	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW354S	18 Apr 2024	0908 MW354S 240418	Normal	NSW 0908 PFASOMP 24	On-base	-	4.34	70.9	10.9	81.8	97.2	-	0.49	0.75	6.88	-	<0.02	-	0.2	0.38	1.99	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW354S	25 Sep 2024	0908 MW354S 240925	Normal	NSW 0908 PFASOMP 24	On-base	-	1.72	27.6	14.5	42.1	50.9	-	0.44	0.8	3.1	-	<0.02	-	0.2	0.28	1.75	0.42	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW354S	16 Apr 2025	0908 MW354S 250416	Normal	NSW 0908 PFASOMP 25	On-base	-	1.92	45.4	9.36	54.8	62.2	0.05	0.21	0.49	3.51	<0.02	<0.02	<0.05	<0.1	0.12	0.84	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW406	09 Feb 2016	W6 09022016	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	
MW406	25 Aug 2016	W6 250816	Normal	NSW 0908 PFAS	On-base	-	0.01	0.03	0.04	0.07	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	<0.05	-	-		
MW406	19 Oct 2016	W6 191016	Normal	NSW 0908 PFAS	On-base	-	<0.01	0.02	0.03	0.05	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	-	
MW406	19 Oct 2016	QC105 191016	Field D	NSW 0908 PFAS	On-base	-	<0.01	0.01	0.04	0.05	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	-	
MW406	11 Jan 2017	QC811 GW 11012017	Interlab D	NSW 0908 PFAS	On-base	-	<0.02	<0.01	0.034	0.034	-	-	<0.01	-	-	-	<0.02	-	<0.05	<0.02	0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	-	<0.05	<0.05	-	<0.02	-	-	-	-	-	-		
MW406	12 Jan 2017	W6 GW 12012017	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW406	03 Apr 2018	W6 GW 03042018	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	0.02	0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW406	03 Apr 2018	W6 GW 03042018	Normal	NSW 0908 PFAS	On-base	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW406	29 Jun 2018	0908 W6 180629	Normal	NSW 0908 Stage2	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	21 Nov 2018	0908 W6 181121	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	28 May 2019	0908 W6 190528	Normal	NSW 0908 PFAS	On-base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	12 May 2020	0908 MW406 200512	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	19 May 2021	0908 MW406 210519	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	0.03	0.03	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	24 May 2022	0908 MW406 220524	Normal	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	24 May 2022	0908 QC113 220524	Field D	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	24 May 2022	0908 QC213 220524	Interlab D	NSW 0908 PFASOMP	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW406	08 May 2023	0908 MW406 230508	Normal	NSW 0908 PFASOMP 23	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02		

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMRC 2025 Drinking Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Atto	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.06	11.8	0.8	12.6	13.4	-	0.08	0.1	0.06	-	<0.02	-	<0.1	0.09	0.36	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW466	23 Apr 2019	0908 W66 190423	Normal	NSW 0908 PFASMGMT	On-base	-	0.04	8.73	0.5	9.23	9.99	-	0.04	0.05	0.04	-	0.04	-	0.2	0.11	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	22 May 2019	0908 W66 190522	Normal	NSW 0908 PFASMGMT	On-base	-	0.05	9.65	0.65	10.3	11	-	0.04	0.05	0.04	-	0.05	-	<0.1	0.15	0.24	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	31 May 2019	0908 W66 190531	Normal	NSW 0908 PFAS	On-base	-	0.07	6.82	0.93	7.75	8.46	-	0.04	0.08	0.04	-	<0.02	-	<0.1	0.13	0.31	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	19 Jun 2019	0908 W66 190619	Normal	NSW 0908 PFASMGMT	On-base	-	0.14	9.04	1.96	11	12.4	-	0.2	0.2	0.1	-	0.04	-	<0.1	0.23	0.43	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	24 Sep 2019	0908 W66 190924	Normal	NSW 0908 PFASMGMT	On-base	-	0.12	10.3	1.65	12	13.4	-	0.09	0.12	0.08	-	0.03	-	0.1	0.3	0.52	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	08 Nov 2019	0908 MW466 191108	Normal	NSW 0908 PFASOMP	On-base	-	0.11	6.98	1.03	8.01	9.3	-	0.06	0.08	0.08	-	0.03	-	<0.1	0.25	0.55	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	03 Dec 2019	0908 W66 191203	Normal	NSW 0908 PFASMGMT	On-base	-	<0.05	1.67	0.2	1.87	1.87	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	<0.05		
MW466	16 Mar 2020	0908 W66 200316	Normal	NSW 0908 PFASMGMT	On-base	-	0.07	3.35	3.41	6.76	9.29	-	0.65	0.83	0.06	-	<0.02	-	<0.1	0.22	0.64	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	11 May 2020	0908 MW466 200511	Normal	NSW 0908 PFASOMP	On-base	-	0.12	7.22	2.72	9.94	11.8	-	0.28	0.27	0.09	-	0.04	-	0.2	0.19	0.5	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.13	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	22 Jun 2020	0908 MW466 200622	Normal	NSW 0908 PFASMGMT	On-base	-	0.13	5.25	4.38	9.63	13	-	0.47	0.84	0.12	-	0.06	-	0.1	0.3	1.1	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.12	<0.05	<0.05	0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	01 Oct 2020	0908 MW466 201001	Normal	NSW 0908 PFASMGMT	On-base	-	0.07	2	2.41	4.41	5.26	-	0.15	0.18	0.06	-	<0.02	-	<0.1	0.06	0.28	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	13 Jan 2021	0908 MW466 210113	Normal	NSW 0908 PFASMGMT	On-base	-	0.16	6.13	2.92	9.05	11.1	-	0.34	0.39	0.19	-	0.04	-	<0.1	0.12	0.57	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.11	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	29 Mar 2021	0908 MW466 210329	Normal	NSW 0908 PFASMGMT	On-base	-	0.14	0.74	1.22	1.96	5.8	-	0.14	0.12	0.03	-	<0.02	-	0.8	0.89	1.5	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	27 Apr 2021	0908 MW466 210427	Normal	NSW 0908 WQMP 21	On-base	-	0.42	22	6.4	29	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	<0.02	-	-	-	-	-	-	-	-		
MW466	24 May 2021	0908 MW466 210524	Normal	NSW 0908 PFASOMP	On-base	-	0.41	19	6.79	25.8	29.3	-	0.38	0.56	0.39	-	<0.02	-	0.2	0.24	1.13	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	23 Jun 2021	0908 MW466 210623	Normal	NSW 0908 PFASMGMT	On-base	-	0.52	9.03	3.34	12.4	15	-	0.22	0.26	0.37	-	0.05	-	0.1	0.21	0.78	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	28 Jul 2021	0908 MW466 210728	Normal	NSW 0908 WQMP 21	On-base	-	0.52	13	5.3	18.3	21.55	0.09	0.23	0.32	0.56	<0.01	<0.01	-	0.19	0.25	0.87	0.16	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.05	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	22 Sep 2021	0908 MW466 210922	Normal	NSW 0908 PFASMGMT	On-base	-	0.04	0.13	1.66	1.79	2.07	-	0.04	0.06	0.08	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	14 Oct 2021	0908 MW466 211014	Normal	NSW 0908 WQMP 21	On-base	-	0.33	6.8	2.4	9.2	11.54	0.04	0.12	0.18	0.2	0.04	0.01	-	0.19	0.29	0.68	0.12	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.14	<0.01	<0.01	<0.05	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	16 Nov 2021	0908 MW466 211116	Normal	NSW 0908 PFASOMP	On-base	-	0.41	16	3.73	19.7	22.6	-	0.22	0.26	0.4	-	0.06	-	0.1	0.3	0.87	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	11 Jan 2022	0908 MW466 220111	Normal	NSW 0908 PFASMGMT	On-base	-	0.25	16.1	2.05	18.2	20	-	0.12	0.13	0.3	-	0.08	-	<0.1	0.21	0.6	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	0.03	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	19 Jan 2022	0908 MW466 220119	Normal	NSW 0908 WQMP 21	On-base	-	0.28	18	2.5	21	23	-	0.13	0.17	0.28	-	0.08	-	0.1	0.2	0.52	0.1	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5
MW466	28 Jan 2022	0908 MW466 220128	Normal	NSW 0908 PFASMGMT	On-base	-	0.25	17.9	2.78	20.7	22.9	-	0.16	0.2	0.34	-	0.05	-	0.1	0.24	0.68	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	14 Mar 2022	0908 MW466 220314	Normal	NSW 0908 PFASMGMT	On-base	-	0.28	8.33	2.26	10.6	12.4	-	0.14	0.18	0.17	-	<0.02	-	0.2	0.21	0.56	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW466	12 Apr 2022	0908 MW466 220412	Normal	NSW 0908 WQMP 21	On-base	-	0.13	8.4	1.3	9.8	11	-	0.08	0.11	0.1	-	<0.02	-	0.04	0.32	0.24	0.05	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.04	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW466	19 May 2022	0908 MW466 220519	Normal	NSW 0908 PFASOMP	On-base	-	0.17	10	1.84	11.8	13.1	-	0.11	0.12	0.15	-	0.04	-	<0.1	0.12	0.45	0.06	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466	20 Jun 2022	0908 MW466 220620	Normal	NSW 0908 PFASMGMT	On-base	-	0.17	11.8	2.05	13.8	15.2	-	0.1	0.14	0.15	-	0.06	-	<0.1	0.14	0.41	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.11	<0.05	<0.05	0.03	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW466																																									

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
NHMRC 2025 Drinking Water	0.2	0.008	0.03				1																									
PFAS NEMP 2025 Recreational Water	10			2																												
PFAS NEMP 2025 Freshwater 99%	19	0.00023																														

Atr	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
NHMRC 2025 Drinking Water	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational Water	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Freshwater 99%	10			2																													
	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	0.04	0.04	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
POT236	18 May 2022	0908_POT236_220518	Normal	NSW_0908_PFASOMP	Broader Management Zone	Risk Zone C	<0.01	0.04	0.04	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT236	16 May 2023	0908_POT236_230516	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Risk Zone C	<0.01	0.03	0.01	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT303	28 Jun 2017	BWS303_280617	Normal	NSW_0908_PFAS	Broader Management Zone	-	<0.01	<0.01	<0.02	<0.03	-	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT303	27 May 2025	0908_POT303_250527	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005 <td><0.002</td> <td><0.005<td><0.002</td><td><0.005<td><0.002</td><td><0.005</td></td></td>	<0.002	<0.005 <td><0.002</td> <td><0.005<td><0.002</td><td><0.005</td></td>	<0.002	<0.005 <td><0.002</td> <td><0.005</td>	<0.002	<0.005	
POT303	27 May 2025	0908_QC219_250527	Interlab_D	NSW_0908_PFASOMP_25	Broader Management Zone	-	<0.001	<0.001	<0.001	<0.001	<0.001	-	<0.001	<0.001	<0.001	-	<0.002	-	<0.002	<0.002	<0.001	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
POT365	30 Jan 2018	BWS365_300118	Normal	NSW_0908_PFAS	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.03	-	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT365	26 May 2025	0908_POT365_250526	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Risk Zone C	<0.002	0.002	<0.002	0.002	0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005 <td><0.002</td> <td><0.005<td><0.002</td><td><0.005<td><0.002</td><td><0.005</td></td></td>	<0.002	<0.005 <td><0.002</td> <td><0.005<td><0.002</td><td><0.005</td></td>	<0.002	<0.005 <td><0.002</td> <td><0.005</td>	<0.002	<0.005	
POT382	12 Nov 2021	0908_POT382_211112	Normal	NSW_0908_PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT382	18 May 2022	0908_POT382_220518	Normal	NSW_0908_PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT382	14 Nov 2022	0908_POT382_221114	Normal	NSW_0908_PFASOMP	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT382	17 May 2023	0908_POT382_230517	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT382	28 Nov 2023	0908_POT382_231128	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT382	23 Apr 2024	0908_POT382_240423	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT382	20 Sep 2024	0908_POT382_240920	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05<td><0.02</td><td><0.05</td></td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05<td><0.02</td><td><0.05</td></td>	<0.02	<0.05 <td><0.02</td> <td><0.05</td>	<0.02	<0.05	
POT382	16 Apr 2025	0908_POT382_250416	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005 <td><0.002</td> <td><0.005<td><0.002</td><td><0.005<td><0.002</td><td><0.005</td></td></td>	<0.002	<0.005 <td><0.002</td> <td><0.005<td><0.002</td><td><0.005</td></td>	<0.002	<0.005 <td><0.002</td> <td><0.005</td>	<0.002	<0.005	

- Notes
- LOR Limit of Reporting
 - Normal Primary sample
 - Field_D Intra-laboratory duplicate sample
 - Interlab_D Inter-laboratory duplicate sample
 - Denotes first-time detection above LOR
 - Denotes first-time exceedance of drinking water criteria
 - Denotes first-time exceedance of applicable groundwater EPC

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.06	0.82	0.56	1.38	-	-	0.04	-	-	-	<0.01	-	-	0.02	0.13	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	-	<0.05	<0.05	-	-	<0.05	-	-	
SW001	18 Jun 2014	MD1_WATER	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.06	0.73	0.52	1.25	-	-	0.04	-	-	-	<0.01	-	-	0.02	0.13	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-		
SW001	18 Jun 2014	QC1_WATER	Field_D	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.06	0.73	0.52	1.25	-	-	0.04	-	-	-	<0.01	-	-	0.02	0.13	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-		
SW001	26 Jun 2014	QAQC2_WATER	Interlab_D	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.13	5.26	-	5.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-	
SW001	13 Jan 2016	MD1_SW_1312016	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.109	2.52	-	2.52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-		
SW001	15 Jan 2016	MD1_SW_15012016	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.039	1.42	-	1.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-		
SW001	14 Dec 2016	MD1_SW_20161214	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.11	4.3	1.13	5.43	6.06	-	0.09	0.09	0.13	-	<0.02	-	<0.1	0.04	0.12	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	14 Dec 2016	QC401_20161214	Field_D	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.1	5.2	1.22	6.42	7.06	-	0.08	0.08	0.16	-	<0.02	-	<0.1	0.03	0.14	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	14 Dec 2016	QC501_20161214	Interlab_D	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.098	5.5	6.3	11.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	-	-	-	-	-	-	-	-	-	-	
SW001	02 Feb 2017	MD1_SW_020217	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.08	3.06	0.59	3.65	3.98	-	0.04	0.05	0.05	-	<0.02	-	<0.1	<0.02	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	
SW001	09 Feb 2017	MD1_SW_090217	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.05	0.44	0.16	0.6	0.6	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12		
SW001	16 Feb 2017	MD1_SW_16022017	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.17	6.12	1.5	7.62	8.6	-	0.1	0.11	0.18	-	<0.02	-	0.1	0.07	0.2	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Feb 2017	MD1_SW_240217	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.11	3.76	0.91	4.67	5.24	-	0.07	0.07	0.11	-	<0.02	-	<0.1	0.05	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	02 Mar 2017	MD1_SW_020317	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	02 Mar 2017	QC410_SW_020317	Field_D	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.14	0.07	0.21	0.21	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	02 Mar 2017	QC509_02032017	Interlab_D	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.02	0.16	0.084	0.244	-	-	<0.01	-	-	-	<0.02	-	<0.05	<0.02	0.017	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	-	<0.05	<0.05	-	<0.02	-	-	-	-	-		
SW001	09 Mar 2017	MD1_SW_090317	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.02	0.3	0.23	0.53	0.62	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	16 Mar 2017	MD1_SW_20170316	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.1	0.02	0.12	0.12	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	23 Mar 2017	MD1_SW_230317	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	0.02	1.11	0.34	1.45	1.63	-	0.03	0.03	0.03	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	24 Mar 2017	MD1_AS_240317_0330	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.04	0.02	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0331	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.03	<0.02	<0.03	<0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0430	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.03	<0.02	<0.03	<0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0445	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.04	<0.02	<0.04	<0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0500	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.05	0.02	0.07	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0600	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.09	0.02	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0615	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.04	<0.02	<0.04	<0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0630	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.04	<0.02	<0.04	<0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	24 Mar 2017	MD1_AS_240317_0645	Normal	NSW_0908_PFAS	Secondary Management Zone	Region 1	<0.01	0.03	<0.02	<0.03	<0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	31 Mar 2017	MD1_AS_310317_2345	Normal	NSW_0908_PFAS	Secondary Management Zone																																				

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.12	4.83	1.25	6.08	-	-	0.08	0.11	0.14	-	<0.02	-	0.1	0.06	0.25	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	09 Apr 2019	0908_MD01_190409	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.12	4.83	1.25	6.08	-	-	0.08	0.11	0.14	-	<0.02	-	0.1	0.06	0.25	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW001	14 Jun 2019	0908_MD1_SW_190614	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.03	2.45	0.38	2.83	2.98	-	<0.02	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	05 Nov 2019	0908_MD1_SW_191105	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.08	<0.02	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	02 Jun 2020	0908_SW001_200602	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.04	2.24	0.48	2.72	2.99	-	0.03	0.03	0.06	-	<0.02	-	<0.1	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	27 Oct 2020	0908_SW001_201027	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.04	0.49	0.2	0.69	0.69	-	<0.04	<0.04	<0.04	-	<0.02	-	<0.1	<0.04	<0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	28 Oct 2020	0908_SW001_201028	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.05	0.66	0.23	0.89	0.95	-	<0.05	<0.05	<0.05	-	<0.02	-	<0.1	<0.05	0.06	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	28 Oct 2020	0908_QC100_201028	Field_D	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.05	0.6	0.25	0.85	0.93	-	<0.05	<0.05	<0.05	-	<0.02	-	<0.1	<0.05	0.08	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	20 Nov 2020	0908_SW001_201120	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.13	5.3	1.67	6.97	8.05	-	0.16	0.16	0.19	-	<0.02	-	<0.1	0.06	0.33	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	20 Nov 2020	0908_QC102_201120	Field_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.12	6.86	1.68	8.54	9.58	-	0.15	0.16	0.19	-	<0.02	-	<0.1	0.06	0.32	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	20 Nov 2020	0908_QC202_201120	Interlab_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.06	2.6	1	3.6	-	-	0.09	0.097	0.082	<0.01	<0.01	<0.02	<0.05	0.039	0.18	0.028	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01		
SW001	18 Dec 2020	0908_SW001_201218	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.03	1.85	0.39	2.24	2.45	-	0.03	0.03	0.04	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	18 Dec 2020	0908_QC100_201218	Field_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.03	1.89	0.42	2.31	2.53	-	0.03	0.03	0.04	-	<0.02	-	<0.1	0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	18 Dec 2020	0908_QC200_201218	Interlab_D	NSW_0908_PFA	Secondary Management Zone	Region 1	0.03	1.8	0.44	2.24	-	-	0.022	0.026	0.035	<0.01	<0.01	<0.02	<0.05	0.024	0.072	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01		
SW001	21 Dec 2020	0908_SW001_2012211510	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.02	0.81	0.2	1.01	1.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW001	21 Dec 2020	0908_SW001_2012211610	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.45	0.09	0.54	0.54	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	21 Dec 2020	0908_SW001_2012211710	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.39	0.09	0.48	0.48	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	21 Dec 2020	0908_SW001_2012211810	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.49	0.14	0.63	0.65	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	21 Dec 2020	0908_SW001_2012211910	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.69	0.16	0.85	0.89	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	21 Dec 2020	0908_SW001_2012212010	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.57	0.14	0.71	0.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	21 Dec 2020	0908_SW001_2012212110	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.62	0.14	0.76	0.79	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	21 Dec 2020	0908_SW001_2012212210	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	0.01	0.59	0.13	0.72	0.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	21 Dec 2020	0908_SW001_2012212310	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.44	0.1	0.54	0.54	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220010	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.45	0.09	0.54	0.54	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220110	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.27	0.06	0.33	0.33	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW001	22 Dec 2020	0908_SW001_2012220210	Normal	NSW_0908_PFA	Secondary Management Zone	Region 1	<0.01	0.36	0.1	0.46	0.46	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<																				

[illegible]

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluoronanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTEdA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.03	1.56	0.37	1.93	2.15	-	0.02	0.03	0.04	-	<0.02	-	<0.1	0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW005	19 Feb 2021	0908_QC100_210219	Field_D	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.03	1.56	0.37	1.93	2.15	-	0.02	0.03	0.04	-	<0.02	-	<0.1	0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW005	19 Feb 2021	0908_QC200_210219	Interlab_D	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.024	1.1	0.26	1.36	-	-	0.017	0.017	0.02	<0.01	<0.01	<0.02	<0.05	<0.02	0.042	0.012	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	<0.02	<0.01
SW005	26 Mar 2021	0908_SW005_210326	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.01	0.38	0.14	0.52	0.56	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW005	23 Apr 2021	0908_SW005_210423	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.04	1.35	0.53	1.88	2.15	-	0.04	0.04	0.04	-	<0.02	-	<0.1	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	11 May 2021	0908_SW005_210511	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.02	0.58	0.23	0.81	0.89	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	25 Jun 2021	0908_SW005_210625	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	<0.01	0.41	0.14	0.55	0.57	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW005	30 Jul 2021	0908_SW005_210730	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.03	1.32	0.43	1.75	1.96	-	0.03	0.03	0.04	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	20 Aug 2021	0908_SW005_210820	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.02	0.81	0.3	1.11	1.25	-	0.02	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	20 Aug 2021	0908_QC200_210820	Interlab_D	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.047	0.51	0.96	1.47	-	-	0.087	0.098	0.028	<0.01	<0.01	<0.02	<0.05	0.044	0.17	0.028	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05		
SW005	27 Sep 2021	0908_SW005_210927	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.02	0.87	0.23	1.1	1.19	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	25 Oct 2021	0908_SW005_211025	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	<0.01	0.15	0.06	0.21	0.21	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW005	17 Nov 2021	0908_SW005_211117	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.02	0.71	0.29	1	1.11	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	18 May 2022	0908_SW005_220518	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	0.02	1.68	0.25	1.93	2.03	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	08 Nov 2022	0908_SW005_221108	Normal	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	<0.01	0.24	0.09	0.33	0.35	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	08 Nov 2022	0908_QC108_221108	Field_D	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	<0.01	0.24	0.12	0.36	0.38	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	08 Nov 2022	0908_QC208_221108	Interlab_D	NSW_0908_PFAASOMP	Broader Management Zone	Region 1	<0.01	0.17	0.09	0.27	0.29	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
SW005	09 May 2023	0908_SW005_230509	Normal	NSW_0908_PFAASOMP_23	Broader Management Zone	Region 1	<0.01	0.37	0.09	0.46	0.46	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	09 May 2023	0908_QC111_230509	Field_D	NSW_0908_PFAASOMP_23	Broader Management Zone	Region 1	<0.01	0.22	0.09	0.31	0.31	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	09 May 2023	0908_QC211_230509	Interlab_D	NSW_0908_PFAASOMP_23	Broader Management Zone	Region 1	<0.01	0.25	0.11	0.36	0.39	-	<0.01	0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.5	
SW005	21 Nov 2023	0908_SW005_231121	Normal	NSW_0908_PFAASOMP_23	Broader Management Zone	Region 1	<0.01	0.04	<0.01	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	16 Apr 2024	0908_SW005_240416	Normal	NSW_0908_PFAASOMP_24	Broader Management Zone	Region 1	0.01	0.66	0.16	0.82	0.87	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	16 Apr 2024	0908_QC103_240416	Field_D	NSW_0908_PFAASOMP_24	Broader Management Zone	Region 1	0.01	0.8	0.16	0.96	1.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	16 Apr 2024	0908_QC203_240416	Interlab_D	NSW_0908_PFAASOMP_24	Broader Management Zone	Region 1	0.02	0.86	0.21	1.1	1.2	-	0.01	0.01	0.02	-	<0.02	-	<0.02	<0.02	0.06	<0.01	<0.01	<0.02	<0.02	<0.05	<0.01	<0.5	<0.01	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.01	<0.02	<0.5	
SW005	27 Sep 2024	0908_SW005_240927	Normal	NSW_0908_PFAASOMP_24	Broader Management Zone	Region 1	0.02	0.54	0.22	0.76	0.82	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW005	02 Apr 2025	0908_SW005_250402	Normal	NSW_0908_PFAASOMP_25	Broader Management Zone	Region 1	<0.01	0.71	0.16	0.87	0.89	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05									

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.01	0.81	0.27	1.08	1.13	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	09 Mar 2017	MD7_SW_090317	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.01	0.81	0.27	1.08	1.13	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	16 Mar 2017	MD7_SW_20170316	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	<0.01	1.12	0.44	1.56	1.68	-	0.05	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	23 Mar 2017	MD7_SW_230317	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.07	8.11	0.73	8.84	9.37	-	0.03	0.04	0.08	-	<0.02	-	<0.1	0.04	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	31 Mar 2017	MD7_SW_310317	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.01	0.79	0.24	1.03	1.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	05 Apr 2017	MD7_SW_050417	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.18	11.8	2.91	14.7	16.2	-	0.12	0.17	0.19	-	<0.02	-	<0.1	0.12	0.67	0.09	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	05 Apr 2017	MD7_SW_050417	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	-	-	-	14.71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW007	04 May 2017	MD7_SW_040517	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.34	20.2	4.5	24.7	-	-	0.13	0.27	0.44	-	<0.02	-	<0.1	<0.02	1.04	0.1	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	01 Jun 2017	MD7_SW_010617	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.25	3.06	3.06	6.12	8.18	-	0.18	0.22	0.14	-	<0.02	-	<0.1	0.15	1	0.12	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	20 Jul 2017	MD7_SW_200717	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.21	31.4	4.79	36.19	37.5	-	0.09	0.15	0.28	-	<0.02	-	<0.1	0.1	0.42	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	20 Jul 2017	MD7_SW_200717	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	-	-	-	36.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW007	12 Apr 2018	MD7_SW_12042018	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.09	2.64	1.01	3.65	4.35	-	0.04	0.06	0.07	-	<0.02	-	<0.1	0.07	0.33	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	12 Apr 2018	QC100_SW_12042018	Field_D	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.09	2.8	1.03	3.83	4.57	-	0.04	0.07	0.07	-	<0.02	-	<0.1	0.08	0.35	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	12 Apr 2018	QC200_SW_12042018	Interlab_D	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.067	2.6	0.96	3.56	-	-	0.044	0.064	0.048	<0.01	<0.01	<0.02	0.052	0.065	0.27	0.037	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01
SW007	06 Dec 2018	0908_MD7_SW_181206	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	0.11	7.34	1.35	8.69	9.46	-	0.06	0.09	0.1	-	<0.02	-	<0.1	0.08	0.28	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	14 Jun 2019	0908_MD7_SW_190614	Normal	NSW_0908_PFAAS	Secondary Management Zone	Region 1	<0.01	2.67	0.32	2.99	3.1	-	0.02	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	05 Nov 2019	0908_MD7_SW_191105	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.06	4.92	0.42	5.34	5.94	-	<0.02	0.03	0.04	-	<0.02	-	<0.1	0.12	0.17	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	02 Jun 2020	0908_SW007_200602	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.44	23.3	3.67	27	30.4	-	0.13	0.21	0.3	-	<0.02	-	0.2	0.46	1.22	0.2	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	20 Nov 2020	0908_SW007_201120	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.26	19.9	2.13	22	23.6	-	0.08	0.11	0.21	-	<0.02	-	<0.1	0.25	0.54	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	18 Dec 2020	0908_SW007_201218	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.06	5.06	0.44	5.5	5.81	-	<0.02	0.02	0.04	-	<0.02	-	<0.1	0.05	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW007	21 Dec 2020	0908_SW007_2012211650	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.04	4.62	0.25	4.87	5.12	-	0.03	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012211750	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.04	4.1	0.25	4.35	4.6	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012211850	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.04	3.73	0.27	4	4.23	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012211950	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.02	1.96	0.12	2.08	2.29	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012212050	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.01	1.43	0.1	1.53	1.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012212150	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.01	1.43	0.1	1.53	1.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012212250	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.02	1.7	0.14	1.84	2.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012212350	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 1	0.02	2.09	0.2	2.29																													

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluoronanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.09	7.7	0.88	8.58	9.23	-	0.03	0.05	0.09	-	<0.02	-	<0.1	0.04	0.31	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300600	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	7.7	0.88	8.58	9.23	-	0.03	0.05	0.09	-	<0.02	-	<0.1	0.04	0.31	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300700	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	7.49	0.87	8.36	8.88	-	<0.02	0.05	0.08	-	<0.02	-	<0.1	0.07	0.19	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300800	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.1	7.66	0.95	8.61	9.2	-	0.03	0.05	0.09	-	<0.02	-	<0.1	0.07	0.21	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101300900	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.1	8.38	1	9.38	10	-	0.03	0.06	0.09	-	<0.02	-	<0.1	0.07	0.23	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101301000	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.12	8.56	1.11	9.67	10.4	-	0.04	0.06	0.1	-	<0.02	-	<0.1	0.08	0.25	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101301100	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.1	8.43	1.02	9.45	10.1	-	0.04	0.06	0.09	-	<0.02	-	<0.1	0.08	0.23	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jan 2021	0908_SW007_2101301200	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.11	8.6	1.13	9.73	10.4	-	0.04	0.07	0.1	-	<0.02	-	<0.1	0.09	0.25	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	19 Feb 2021	0908_SW007_210219	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.03	3.07	0.22	3.29	3.43	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	26 Mar 2021	0908_SW007_210326	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.12	9.48	1.3	10.8	11.7	-	0.05	0.08	0.08	-	<0.02	-	<0.1	0.12	0.33	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW007	23 Apr 2021	0908_SW007_210423	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.16	10.3	1.62	11.9	13	-	0.07	0.11	0.14	-	<0.02	-	<0.1	0.13	0.36	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW007	11 May 2021	0908_SW007_210511	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.15	10.3	1.5	11.8	12.8	-	0.07	0.09	0.14	-	<0.02	-	<0.1	0.13	0.32	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	25 Jun 2021	0908_SW007_210625	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.15	15.7	1.55	17.2	18.2	-	0.05	0.1	0.15	-	<0.02	-	<0.1	0.12	0.32	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	30 Jul 2021	0908_SW007_210730	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.2	18.2	1.81	20	21.2	-	0.07	0.1	0.16	-	<0.02	-	<0.1	0.16	0.46	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	20 Aug 2021	0908_SW007_210820	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.13	11.9	1.09	13	13.9	-	0.04	0.06	0.1	-	<0.02	-	<0.1	0.2	0.32	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	27 Sep 2021	0908_SW007_210927	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	6.82	0.58	7.4	7.75	-	0.02	0.03	0.04	-	<0.02	-	<0.1	0.04	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	27 Sep 2021	0908_QC100_210927	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	6.71	0.55	7.26	7.62	-	<0.02	0.03	0.05	-	<0.02	-	<0.1	0.04	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	27 Sep 2021	0908_QC200_210927	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.057	6.1	0.55	6.65	-	-	0.019	0.029	0.04	<0.01	<0.01	<0.02	<0.05	0.048	0.13	0.025	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.021	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05		
SW007	25 Oct 2021	0908_SW007_211025	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.07	12.4	0.63	13	13.5	-	0.02	0.04	0.06	-	<0.02	-	<0.1	0.07	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	25 Oct 2021	0908_QC100_211025	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.07	11.7	0.59	12.3	12.7	-	0.02	0.04	0.06	-	<0.02	-	<0.1	0.06	0.17	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	25 Oct 2021	0908_QC200_211025	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.09	15	0.67	16	16	-	0.02	0.04	0.09	-	<0.02	-	0.07	0.07	0.18	0.04	0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.02	<0.02	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW007	16 Nov 2021	0908_SW007_211116	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.16	12.8	1.54	14.3	15.5	-	0.08	0.09	0.12	-	<0.02	-	<0.1	0.13	0.48	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	16 Nov 2021	0908_QC116_211116	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.16	10.5	1.35	11.8	12.9	-	0.07	0.08	0.1	-	<0.02	-	<0.1	0.12	0.42	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	18 May 2022	0908_SW007_220518	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.11	11.2	1	12.2	13	-	0.04	0.06	0.11	-	<0.02	-	<0.1	0.09	0.28	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW007	13 Jul 2022	0908_SW007_220713	Normal	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	0.07	6.32	0.65	6.97	7.55	-	0.04	0.05	0.04	-	<0.02	-	<0.1	0.06	0.17	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.12	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW007	12 Aug 2022	0908_SW007_220812	Normal	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	0.06	7.43	0.8	8.23	8.74	-	0.05	0.06	0.05	-	<0.02	-	<0.1	0.06	0.19	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	12 Aug 2022	0908_QC101_220812	Field_D	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	0.07	7.24	0.85	8.09	8.6	-	0.04	0.06	0.06	-	<0.02																								

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTEdA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSA-A)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSA-A)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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[illegible]

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides						
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSA-A)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSA-A)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.01	0.1	0.12	0.22	0.26	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5
SW024	17 Nov 2021	0908_SW024_211117	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 2	<0.01	0.07	0.12	0.19	0.21	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	18 Jan 2022	0908_SW024_220118	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.08	0.05	0.13	0.13	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	18 Jan 2022	0908_QC101_220118	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.09	0.05	0.14	0.15	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	18 Jan 2022	0908_QC201_220118	Interlab_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.11	0.05	0.16	0.16	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	07 Mar 2022	0908_SW024_220307	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.19	0.23	0.42	0.5	-	0.02	0.02	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	07 Mar 2022	0908_QC101_220307	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.19	0.25	0.44	0.52	-	0.02	0.02	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	07 Mar 2022	0908_QC201_220307	Interlab_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.18	0.2	0.38	0.46	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	11 Apr 2022	0908_SW024_220411	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.26	0.18	0.44	0.53	-	0.02	0.01	0.01	-	<0.02	-	<0.02	<0.02	0.04	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	11 Apr 2022	0908_QC101_220411	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.02	0.26	0.19	0.44	0.53	-	0.01	0.02	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	11 Apr 2022	0908_QC201_220411	Interlab_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.27	0.19	0.46	0.51	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	16 May 2022	0908_SW024_220516	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 2	0.01	0.24	0.23	0.47	0.55	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	12 Jul 2022	0908_SW024_220712	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.33	0.13	0.46	0.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-
SW024	19 Jul 2022	0908_SW024_220719	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.46	0.15	0.61	0.68	-	0.01	0.01	0.01	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW024	17 Oct 2022	0908_SW024_221017	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	0.01	0.31	0.24	0.55	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-
SW024	08 Nov 2022	0908_SW024_221108	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 2	<0.01	0.27	0.12	0.39	0.42	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	20 Jan 2023	0908_SW024_230120	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.04	0.03	0.06	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-
SW024	20 Jan 2023	0908_QC105_230120	Field_D	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.03	0.02	0.05	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-
SW024	21 Apr 2023	0908_SW024_230421	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.12	0.1	0.22	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-
SW024	09 May 2023	0908_SW024_230509	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Region 2	<0.01	0.06	0.05	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	07 Jul 2023	0908_SW024_230707	Normal	NSW_0908_WQMP_21	Broader Management Zone	Region 2	<0.01	0.03	0.05	0.09	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-
SW024	20 Nov 2023	0908_SW024_231120	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Region 2	<0.01	0.03	0.03	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	16 Apr 2024	0908_SW024_240416	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Region 2	<0.01	0.05	0.04	0.09	0.09	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	27 Sep 2024	0908_SW024_240927	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Region 2	<0.01	0.05	0.05	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW024	02 Apr 2025	0908_SW024_250402	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Region 2	<0.01	0.05	0.06	0.11	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.1	<0.02	<0.5	
SW047	17 Nov 2014	BD03_SW01_171114	Normal	NSW_0908_PFAS	On-base	-	0.25	17	2.2	19.2	-	-	0.16	-	-	-	<0.01	-	-	<0.01	0.34	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-
SW047	17 Nov 2014	QC101_SW_171114	Interlab_D	NSW_0908_PFAS	On-base	-	0.29	16	2.1	18.1	-	-	0.13	-	-	-	<0.01	-	-	<0.01	0.41	0.09	0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-	
SW047	14 Jan 2016	BD03_SW_1412016	Normal	NSW_0908_PFAS	On-base	-	0.9	31.6	5.16	36.76	-	-	0.249	-	-	-	<0.005	-	-	-	1.74	0.125	0.01	0.007	<0.005	<0.005	<0.005	<0.05	-	0.02	<0.01	-	0.007	<0.05	-	<0.1	<0.005	-	<0.1
SW047	14 Sep 2016	BD03_140916	Normal	NSW_0908_PFAS	On-base	-	0.15	17	1.3	18.3	-	-	0.1	0.13	0.17	0.046	<0.01	<0.2	<0.5	0.047	0.27																		

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluoronanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTEdA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTEdA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region		<0.01	0.09	0.16	0.25	0.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW055	10 Mar 2017	DD1_AS_100317_1100	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.08	0.15	0.23	0.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	10 Mar 2017	DD1_AS_100317_1130	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.07	0.13	0.2	0.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	10 Mar 2017	DD1_AS_100317_1715	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.07	0.12	0.19	0.19	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	10 Mar 2017	DD1_AS_100317_1730	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.07	0.11	0.18	0.18	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	10 Mar 2017	DD1_SW_100317	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.06	0.06	0.12	0.12	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	17 Mar 2017	DD1_SW_20170317	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.14	0.55	0.69	0.81	-	<0.02	0.03	<0.02	-	<0.02	-	<0.1	0.04	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	20 Mar 2017	DD1_AS_200317_1545	Normal	NSW_0908_PFAS	On-base	-		0.02	0.64	0.38	1.02	1.13	-	0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	20 Mar 2017	DD1_AS_200317_1600	Normal	NSW_0908_PFAS	On-base	-		0.02	0.64	0.36	1	1.12	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	20 Mar 2017	DD1_AS_200317_1615	Normal	NSW_0908_PFAS	On-base	-		0.03	1.01	0.84	1.85	2.14	-	0.06	0.06	0.04	-	<0.02	-	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_815	Normal	NSW_0908_PFAS	On-base	-		0.03	0.91	0.67	1.58	1.82	-	0.05	0.05	0.03	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_830	Normal	NSW_0908_PFAS	On-base	-		0.02	0.7	0.5	1.2	1.38	-	0.04	0.04	0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_845	Normal	NSW_0908_PFAS	On-base	-		0.02	0.65	0.38	1.03	1.15	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_900	Normal	NSW_0908_PFAS	On-base	-		0.01	0.56	0.3	0.86	0.95	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_915	Normal	NSW_0908_PFAS	On-base	-		0.01	0.53	0.26	0.79	0.87	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_930	Normal	NSW_0908_PFAS	On-base	-		0.01	0.53	0.25	0.78	0.86	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_945	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.44	0.22	0.66	0.68	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_1015	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.49	0.27	0.76	0.79	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_1115	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.5	0.28	0.78	0.81	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_1130	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.42	0.22	0.64	0.66	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_1145	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.3	0.14	0.44	0.44	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_1215	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.22	0.07	0.29	0.29	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210317_1230	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.24	0.07	0.31	0.31	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	21 Mar 2017	DD1_AS_210347_1200	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.25	0.1	0.35	0.35	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	22 Mar 2017	DD1_SW_220317	Normal	NSW_0908_PFAS	On-base	-		0.02	0.75	0.61	1.36	1.57	-	0.04	0.04	0.02	-	<0.02	-	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	31 Mar 2017	DD1_SW_310317	Normal	NSW_0908_PFAS	On-base	-		0.01	0.42	0.31	0.73	0.78	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	07 Apr 2017	DD1_SW_070417	Normal	NSW_0908_PFAS	On-base	-		0.03	0.38	0.55	0.93	1.11	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW055	05 May 2017	DD1_SW_050517	Normal	NSW_0908_PFAS	On-base	-		<0.01	0.51	0.26	0.77	-	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<													

[illegible]

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Location	Date	Field ID	Sample Type	Project ID	H-base/Management Zone	Region	0.05	0.82	1.25	2.07	2.7	-	0.11	0.13	0.06	-	<0.02	-	<0.1	0.04	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	28 Jan 2021	0908_QC106_210128	Field_D	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.05	0.82	1.25	2.07	2.7	-	0.11	0.13	0.06	-	<0.02	-	<0.1	0.04	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	28 Jan 2021	0908_QC206_210128	Field_D	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.05	0.85	1.17	2.02	2.58	-	0.1	0.12	0.06	-	<0.02	-	<0.1	0.02	0.2	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	28 Jan 2021	0908_QC108_210128	Field_D	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.05	0.96	1.22	2.18	2.77	-	0.1	0.12	0.05	-	<0.02	-	<0.1	0.03	0.21	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	28 Jan 2021	0908_QC205_210128	Interlab_D	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.042	0.66	1.1	1.76	-	-	0.094	0.11	0.028	<0.01	<0.01	<0.02	0.037	0.16	0.021	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05
SW059	28 Jan 2021	0908_QC206_210128	Interlab_D	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.039	0.66	1	1.66	-	-	0.08	0.089	0.024	<0.01	<0.01	<0.02	0.035	0.15	0.019	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05
SW059	28 Jan 2021	0908_QC207_210128	Interlab_D	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.038	0.77	0.97	1.74	-	-	0.083	0.093	0.024	<0.01	<0.01	<0.02	0.033	0.15	0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05
SW059	28 Jan 2021	0908_QC208_210128	Interlab_D	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.04	0.89	1.1	1.99	-	-	0.091	0.1	0.026	<0.01	<0.01	<0.02	0.038	0.18	0.023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05
SW059	29 Jan 2021	0908_SW059_210129	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.11	1.62	2.46	4.08	5.45	-	0.21	0.27	0.11	-	<0.02	-	<0.1	0.11	0.51	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	29 Jan 2021	0908_SW059_2101290030	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.06	1.12	1.47	2.59	3.29	-	0.11	0.15	0.06	-	<0.02	-	<0.1	0.04	0.24	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	29 Jan 2021	0908_SW059_2101290130	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.07	1.24	1.6	2.84	3.65	-	0.12	0.17	0.07	-	<0.02	-	<0.1	0.05	0.29	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290230	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.06	1.13	1.48	2.61	3.34	-	0.11	0.16	0.07	-	<0.02	-	<0.1	0.04	0.26	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290330	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.08	1.27	1.8	3.07	3.96	-	0.13	0.19	0.08	-	<0.02	-	<0.1	0.05	0.32	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290430	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.08	1.23	1.82	3.03	3.97	-	0.14	0.18	0.08	-	<0.02	-	<0.1	0.06	0.34	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290530	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.09	1.44	2.11	3.55	4.64	-	0.18	0.22	0.09	-	<0.02	-	<0.1	0.06	0.4	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290630	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.1	1.44	2.37	3.81	5.09	-	0.21	0.25	0.1	-	<0.02	-	<0.1	0.08	0.48	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290730	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.12	1.37	2.91	4.28	5.74	-	0.24	0.31	0.1	-	<0.02	-	<0.1	0.09	0.53	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290830	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.12	1.42	2.71	4.13	5.58	-	0.24	0.29	0.11	-	<0.02	-	<0.1	0.09	0.53	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101290930	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.13	1.52	2.94	4.46	6.1	-	0.26	0.3	0.13	-	<0.02	-	0.1	0.09	0.56	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101291030	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.14	1.57	3.04	4.61	6.23	-	0.27	0.32	0.14	-	<0.02	-	<0.1	0.09	0.58	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101291130	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.14	1.48	2.94	4.42	6.03	-	0.24	0.3	0.13	-	<0.02	-	0.1	0.09	0.54	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101291230	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.13	1.48	2.98	4.46	6.08	-	0.25	0.3	0.13	-	<0.02	-	0.1	0.09	0.55	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101291330	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.13	1.53	2.76	4.29	5.85	-	0.22	0.28	0.12	-	<0.02	-	0.1	0.13	0.51	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101291430	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.13	1.76	2.83	4.59	6.05	-	0.22	0.28	0.14	-	<0.02	-	<0.1	0.1	0.52	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	29 Jan 2021	0908_SW059_2101291530	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.13	1.68	2.83	4.51	6.08	-	0.23	0.29	0.13	-	<0.02	-	0.1	0.1	0.52	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	19 Feb 2021	0908_SW059_210219	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.1	2.51	1.92	4.43	5.53	-	0.14	0.16	0.1	-	<0.02	-	<0.1	0.1	0.45	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	26 Mar 2021	0908_SW059_210326	Normal	NSW_0908_PFAASOMP	Secondary Management Zone	Region 3	0.04	0.68	0.63	1.31	1.68	-	0.05	0.05	0.04	-	<0.02	-	<0.1	0.04	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
SW059	31 Mar 2021	0908_SW059_210331	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.04	0.91	0.82	1.7	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-	-	-	
SW059	12 Apr 2021	0908_SW059_210412	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.05	1.3	0.79	2	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-	-	
SW059																																											

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.3	6.72	4.41	11.1	14.6	-	0.63	0.75	0.4	-	<0.02	-	0.1	0.17	0.99	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101282047	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.34	7.64	5.26	12.9	16.9	-	0.76	0.87	0.48	-	<0.02	-	0.1	0.2	1.11	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101282247	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.37	8.6	5.43	14	18.3	-	0.72	1.02	0.51	-	<0.02	-	0.1	0.2	1.2	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_SW060_2101282347	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.42	9.34	6.3	15.6	20.6	-	0.78	1.08	0.63	-	<0.02	-	0.2	0.24	1.36	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_QC104_210128	Field_D	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.3	7.4	4.5	11.9	15.8	-	0.76	0.78	0.39	-	<0.02	-	0.2	0.19	1.1	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	28 Jan 2021	0908_QC204_210128	Interlab_D	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.2	4.3	3.4	7.7	-	-	0.55	0.47	0.19	<0.01	<0.01	<0.02	0.12	0.14	0.7	0.09	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05
SW060	29 Jan 2021	0908_SW060_210129	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.52	12.1	7.47	19.6	25.6	-	0.96	1.25	0.74	-	<0.02	-	0.2	0.35	1.81	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290047	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.48	10.2	6.72	16.9	22.4	-	0.83	1.29	0.68	-	<0.02	-	0.2	0.26	1.52	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290147	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.5	12	7.35	19.4	25	-	0.84	1.24	0.78	-	<0.02	-	0.2	0.28	1.53	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290247	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.51	12.8	7.53	20.3	26.3	-	0.88	1.4	0.81	-	<0.02	-	0.2	0.3	1.63	0.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290347	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.52	12.7	7.47	20.2	26.2	-	0.87	1.39	0.8	-	<0.02	-	0.2	0.3	1.63	0.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290447	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.57	15.2	8.09	23.3	29.8	-	0.92	1.46	0.9	-	<0.02	-	0.2	0.33	1.79	0.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290547	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.51	12.3	7.35	19.6	25.7	-	0.94	1.34	0.82	-	<0.02	-	0.2	0.31	1.66	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290647	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.6	14.5	7.88	22.4	28.9	-	0.99	1.48	0.84	-	<0.02	-	0.2	0.35	1.8	0.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290747	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.5	13.4	6.72	20.1	25.9	-	0.85	1.25	0.79	-	<0.02	-	0.2	0.31	1.61	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290847	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.52	12.7	7.74	20.4	26.3	-	0.9	1.25	0.76	-	<0.02	-	0.2	0.32	1.66	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101290947	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.49	12.2	6.83	19	24.8	-	0.87	1.22	0.74	-	<0.02	-	0.2	0.31	1.64	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291047	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.52	12.2	6.84	19	25	-	0.88	1.32	0.77	-	<0.02	-	0.2	0.31	1.66	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291147	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.48	10.6	6.43	17	22.5	-	0.86	1.02	0.69	-	<0.02	-	0.2	0.28	1.75	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291247	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.53	13.1	7.16	20.3	26.6	-	0.92	1.25	0.78	-	<0.02	-	0.3	0.34	2.02	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291347	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.56	12.6	9.26	21.9	29.7	-	1.34	1.75	0.8	-	<0.02	-	0.3	0.39	2.38	0.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291447	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.44	8.18	6.72	14.9	21.1	-	1.13	1.01	0.58	-	<0.02	-	0.6	0.34	1.9	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291547	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.36	9.16	5.68	14.8	19.5	-	0.87	0.9	0.55	-	<0.02	-	0.2	0.22	1.37	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_QC100_210129	Field_D	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.5	12.8	7.19	20	25.8	-	0.93	1.23	0.73	-	<0.02	-	0.2	0.32	1.71	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	19 Feb 2021	0908_SW060_210219	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.95	18.7	10.4	29.1	40.2	-	1.42	1.78	1.46	-	<0.02	-	0.6	0.66	3.83	0.42	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW060	26 Mar 2021	0908_SW060_210326	Normal	NSW_0908_PFAASOMP	Primary Management Zone	Region 3	0.12	4.26	1.58	5.84	6.84	-	0.11	0.14	0.14	-	<0.02	-	<0.1	0.08	0.36	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.0						

[illegible]

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides						
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSA-A)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSA-A)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.01	0.1	<0.02	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	14 Jun 2019	0908_TFD1_SW_190614	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	-	-	-	0.12	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SW081	05 Nov 2019	0908_TFD1_SW_191105	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.04	<0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	05 Nov 2019	0908_QC105_191105	Field_D	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.04	<0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	05 Nov 2019	0908_QC205_191105	Interlab_D	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.031	0.016	0.047	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05
SW081	02 Jun 2020	0908_SW081_200602	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.04	<0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	12 Nov 2020	0908_SW081_201112	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.03	0.03	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	11 May 2021	0908_SW081_210511	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	30 Nov 2021	0908_SW081_211130	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	16 May 2022	0908_SW081_220516	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	08 Nov 2022	0908_SW081_221108	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	11 May 2023	0908_SW081_230511	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	23 Nov 2023	0908_SW081_231123	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.02	0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	23 Apr 2024	0908_SW081_240423	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.05	0.11	0.16	0.16	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	20 Sep 2024	0908_SW081_240920	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	02 Apr 2025	0908_SW081_250402	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	17 Jun 2025	0908_SW081_250617	Normal	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW081	17 Jun 2025	0908_QC100_250617	Field_D	NSW_0908_PFA	Broader Management Zone	Region 3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW108	23 Jun 2014	LC1_WATER	Normal	NSW_0908_PFA	On-base	-	0.13	0.25	0.67	0.92	-	-	0.07	-	-	-	<0.01	-	0.04	0.35	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	-	-	<0.05	-	-	
SW108	20 Nov 2015	LC_SW_20112015	Normal	NSW_0908_PFA	On-base	-	0.236	13.4	-	13.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	
SW108	14 Jan 2016	LC_SW_1412016	Normal	NSW_0908_PFA	On-base	-	0.191	10.6	-	10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	
SW108	14 Sep 2016	LC_140916	Normal	NSW_0908_PFA	On-base	-	0.12	11	1.2	12.2	-	-	0.072	0.11	0.12	0.033	<0.01	<0.2	<0.5	0.081	0.3	0.038	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	0.013	<0.01	-	<0.01	<0.02	<0.01	<0.2	<0.01	<0.05	<0.2
SW108	16 Dec 2016	LC_SW_161216	Normal	NSW_0908_PFA	On-base	-	0.1	8.76	1.48	10.2	11.1	-	0.12	0.12	0.14	-	<0.02	-	<0.1	0.07	0.33	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW108	16 Dec 2016	LC_SW_161216	Normal	NSW_0908_PFA	On-base	-	-	-	-	10.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW108	03 Feb 2017	LC_SW_030217	Normal	NSW_0908_PFA	On-base	-	0.1	7.97	0.77	8.74	9.53	-	0.06	0.09	0.04	-	<0.02	-	<0.1	<0.02	0.46	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW108	03 Feb 2017	QC405_SW_030217	Field_D	NSW_0908_PFA	On-base	-	0.11	9.13	1.14	10.27	11.3	-	0.07	0.09	0.05	-	<0.02	-	<0.1	0.13	0.55	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW108	03 Feb 2017	QC405_SW_030217	Field_D	NSW_0908_PFA	On-base	-	-	-	-	10.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW108	10 Feb 2017	LC_SW_100217	Normal	NSW_0908_PFA	On-base	-	0.12	4.85	1.43	6.28	7.72	-	0.11	0.14	0.13	-	<0.05	-	<0.2	0.36	0.5	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12
SW108	10 Feb 2017	QC406_SW_100217	Field_D	NSW_0908_PFA	On-base	-	0.1	4.55	1.38	5.93	7.28	-	0.11	0.14	0.12	-	<0.05	-	<0.2	0.32	0.48	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.12	<0.05	<0.12	
SW108	10 Feb 2017	QC505																																					

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTEdA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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[illegible]

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational Water	10			2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region		<0.01	0.08	<0.02	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05	
SW582	14 Sep 2021	0908_SW582_210914	Normal	NSW_0908_PFASMGMT	On-base	-		<0.01	0.08	<0.02	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW582	13 Jul 2022	0908_SW582_220713	Normal	NSW_0908_PFASMGMT	On-base	-		0.09	7.48	0.86	8.34	8.87	-	0.05	0.06	0.07	-	<0.02	-	<0.1	0.06	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW582	12 Aug 2022	0908_SW582_220812	Normal	NSW_0908_PFASMGMT	On-base	-		0.01	0.43	0.16	0.59	0.66	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	
SW582	24 Apr 2024	0908_SW582_240424	Normal	NSW_0908_PFASOMP_24	On-base	-		0.06	3.78	0.64	4.42	4.8	-	0.03	0.05	0.05	-	<0.02	-	<0.1	0.03	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW582	03 Sep 2024	0908_SW582_240903	Normal	NSW_0908_PFASMGMT_24	On-base	-		0.08	4.69	0.76	5.45	5.96	<0.02	0.05	0.06	0.08	0.04	<0.02	<0.05	<0.1	0.04	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW582	25 Sep 2024	0908_SW582_240925	Normal	NSW_0908_PFASOMP_24	On-base	-		0.08	4.04	0.79	4.83	5.32	-	0.04	0.05	0.09	-	<0.02	-	<0.1	0.04	0.13	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW582	21 Nov 2024	0908_SW582_241121	Normal	NSW_0908_PFASMGMT_24	On-base	-		0.08	4.56	0.8	5.36	5.89	<0.02	0.04	0.05	0.08	0.03	<0.02	<0.05	<0.1	0.05	0.16	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW582	16 Apr 2025	0908_SW582_250416	Normal	NSW_0908_PFASOMP_25	On-base	-		0.07	4.92	0.78	5.7	6.12	<0.02	0.03	0.04	0.07	0.04	<0.02	<0.05	<0.1	0.03	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW588	23 Apr 2021	0908_SW588_210423	Normal	NSW_0908_PFASMGMT	On-base	-		0.15	8.07	2.67	10.7	12.3	-	0.21	0.32	0.25	-	<0.02	-	<0.1	0.09	0.5	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW588	08 Jul 2021	0908_SW588_210708	Normal	NSW_0908_PFASMGMT	On-base	-		0.12	9.18	1.67	10.8	12.2	-	0.18	0.24	0.17	-	<0.02	-	<0.1	0.08	0.47	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW588	14 Sep 2021	0908_SW588_210914	Normal	NSW_0908_PFASMGMT	On-base	-		<0.01	0.04	<0.02	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	
SW588	13 Jul 2022	0908_SW588_220713	Normal	NSW_0908_PFASMGMT	On-base	-		0.01	0.54	0.09	0.63	0.66	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	
SW588	03 Sep 2024	0908_SW588_240903	Normal	NSW_0908_PFASMGMT_24	On-base	-		0.08	2.73	0.92	3.65	4.3	0.02	0.09	0.08	0.11	0.02	<0.02	<0.05	<0.1	0.04	0.18	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW588	25 Sep 2024	0908_SW588_240925	Normal	NSW_0908_PFASOMP_24	On-base	-		0.03	1.81	0.41	2.22	2.44	-	0.02	0.03	0.04	-	<0.02	-	<0.1	0.03	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW588	22 Nov 2024	0908_SW588_241122	Normal	NSW_0908_PFASMGMT_24	On-base	-		0.01	0.59	0.12	0.71	0.75	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	
SW588	02 Apr 2025	0908_SW588_250402	Normal	NSW_0908_PFASOMP_25	On-base	-		<0.01	0.14	0.04	0.18	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	
SW600	25 Nov 2022	0908_SW600_221125	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3		0.06	1.42	0.69	2.11	2.65	-	0.06	0.07	0.05	-	<0.02	-	<0.1	0.06	0.19	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW600	15 May 2023	0908_SW600_230515	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 3		0.06	1.36	1.24	2.6	3.37	-	0.15	0.16	0.07	-	<0.02	-	<0.1	0.06	0.23	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW600	27 Nov 2023	0908_SW600_231127	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 3		0.02	0.4	0.28	0.68	0.83	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW600	22 Apr 2024	0908_SW600_240422	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 3		0.06	1.3	1.35	2.65	3.63	-	0.16	0.22	0.08	-	<0.02	-	<0.1	0.06	0.3	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW600	19 Sep 2024	0908_SW600_240919	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 3		0.09	1.76	1.01	2.77	3.62	-	0.1	0.16	0.11	-	<0.02	-	<0.1	0.06	0.25	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05
SW600	10 Apr 2025	0908_SW600_250410	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Region 3		0.08	1.46	0.8	2.26	3	0.06	0.11	0.12	0.07	<0.02	<0.02	<0.05	<0.1	0.08	0.18	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05

Table T10 - Historical Sediment Analytical Results

LOR	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamideethanol (MeF-OSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamideethanol (EtF-OSE)	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0002	0.0005	0.0002	0.0005	0.0005

Date	Field ID	Sample Type	Project ID	On-base/Management Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides									
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	Acids				Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamideethanol (MeFOSAE)	N-ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamideethanol (EFOSAE)		
																											4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)									
LOR						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
SD006	25 Sep 2024	0908_SD006_240925	Normal	NSW_0908_PFA	Secondary Management Zone	0.0006	0.532	0.0199	0.552	0.579	-	0.0005	0.0004	0.0004	0.0028	-	0.0076	<0.001	0.0024	0.0018	0.0004	<0.0002	0.0007	0.0012	0.004	0.0011	0.0024	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0016	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD006	02 Apr 2025	0908_SD006_250402	Normal	NSW_0908_PFA	Secondary Management Zone	0.0013	0.735	0.0173	0.752	0.785	<0.0005	<0.0002	0.0002	0.0024	0.0106	0.0052	<0.001	0.002	0.0025	0.0006	0.0003	0.0007	0.0006	0.0006	0.0035	0.0005	0.0012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD007	13 Jan 2016	MD7_SD_13012016	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0005	<0.0005	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	
SD007	14 Dec 2016	MD7_SED_20161214	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.001	0.0003	0.0013	0.0013	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	12 Apr 2018	MD7_SED_12042018	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0031	0.0004	0.0035	0.0035	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	12 Apr 2018	QC100_SED_12042018	Field_D	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0021	0.0002	0.0023	0.0023	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	12 Apr 2018	QC200_SED_12042018	Interlab_D	NSW_0908_PFA	Secondary Management Zone	<0.001	0.0035	<0.001	0.0045	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005
SD007	06 Dec 2018	0908_MD7_SD_181206	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0241	0.0014	0.0255	0.0257	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	14 Jun 2019	0908_MD7_SD_190614	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.011	0.0002	0.0112	0.0112	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	05 Nov 2019	0908_MD7_SD_191105	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0249	0.001	0.0259	0.0259	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	02 Jun 2020	0908_SD007_200602	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0066	0.0006	0.0072	0.0072	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	20 Nov 2020	0908_SD007_201120	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0156	0.0005	0.0161	0.0161	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	11 May 2021	0908_SD007_210511	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0068	0.0005	0.0073	0.0073	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	16 Nov 2021	0908_SD007_211116	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0471	0.0011	0.0482	0.0487	-	<0.0002	<0.0002	<0.0002	-	0.0003	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	18 May 2022	0908_SD007_220518	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0005	0.0006	0.0056	0.0056	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	08 Nov 2022	0908_SD007_221108	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0088	0.0009	0.0097	0.0097	-	<0.0002																											

Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides									
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	Acids				Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamideethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamideethanol (EFOSSE)		
																											4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)									
LOR						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005
SD014	12 Apr 2018	MD14_SED_12042018	Normal	NSW_0908_PFAS	Broader Management Zone	<0.0002	0.0002	<0.0002	0.0002	0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD014	12 Apr 2018	MD14_SED_12042018	Normal	NSW_0908_PFAS	Broader Management Zone	-	-	-	0.0004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SD014	06 Dec 2018	0908_MD14_SD_181206	Normal	NSW_0908_PFAS	Broader Management Zone	<0.0002	0.0017	<0.0002	0.0017	0.0021	-	<0.0002	<0.0002	<0.0002	-	0.0002	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD014	06 Dec 2018	0908_MD14_SD_181206	Normal	NSW_0908_PFAS	Broader Management Zone	-	-	-	0.0019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
SD014	13 Jun 2019	0908_MD14_SD_190613	Normal	NSW_0908_PFAS	Broader Management Zone	<0.0002	0.0011	<0.0002	0.0011	0.0011	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD014	13 Jun 2019	0908_MD14_SD_190613	Normal	NSW_0908_PFAS	Broader Management Zone	-	-	-	0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
SD014	13 Jun 2019	0908_QC120_190613	Field_D	NSW_0908_PFAS	Broader Management Zone	<0.0002	0.0004	<0.0002	0.0004	0.0004	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD014	13 Jun 2019	0908_QC120_190613	Field_D	NSW_0908_PFAS	Broader Management Zone	-	-	-	0.0006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
SD014	13 Jun 2019	0908_QC220_190613	Interlab_D	NSW_0908_PFAS	Broader Management Zone	<0.001	0.0028	<0.001	0.0038	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
SD014	05 Nov 2019	0908_MD14_SD_191105	Normal	NSW_0908_PFASOMP	Broader Management Zone	<0.0002	0.0011	<0.0002	0.0011	0.0017	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD014	04 Jun 2020	0908_SD014_200604	Normal	NSW_0908_PFASOMP	Broader Management Zone	<0.0002	0.0093	0.0008	0.0101	0.0109	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD014	26 Nov 2020	0908_SD014_201126	Normal	NSW_0908_PFASOMP	Broader Management Zone	<0.0002	0.0496	0.0028	0.0524	0.0524	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0006	<0.0002	<0.0006	<0.0006	<0.0002	<0.0006		
SD014	26 Nov 2020	0908_QC109_201126	Field_D	NSW_0908_PFASOMP	Broader Management Zone	<0.0002	0.0154	0.0008	0.0162	0.0171	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD014	26 Nov 2020	0908_QC209_201126	Interlab_D	NSW_0908_PFASOMP	Broader Management Zone	<0.001	0.037	0.0026	0.0396	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.001	<0.002	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005	
SD014	11 May 2021	0908_SD014_210511	Normal	NSW_0908_PFASOMP	Broader Management Zone	0.0002	0.0705	0.0053	0.0758	0.0787	-	<0.0002	0.0003	0.0006	-	0.0002	<0.001	<0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD014	17 Nov 2021	0908_SD014_211117	Normal	NSW_0908_PFASOMP	Broader Management Zone	0.0005	0.0894	0.0083	0.0977	0.102	-	0.0006	0.0004	0.0006	-	<0.0002	<0.001	0.0004	0.001	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD014	17 Nov 2021	0908_QC212_211117	Interlab_D	NSW_0908_PFASOMP	Broader Management Zone	0.0004	0.059	0																															

Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n-2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides											
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHs and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PTriDA)	Perfluorotetradecanoic acid (PTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)				
mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg						
LOR						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005
SD024	11 May 2021	0908_SD024_210511	Normal	NSW_0908_PFA	Broader Management Zone	0.0005	0.0445	0.004	0.0485	0.0501	-	<0.0002	<0.0002	0.0008	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	17 Nov 2021	0908_SD024_211117	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0034	0.0005	0.0039	0.0039	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD024	17 Nov 2021	0908_QC213_211117	Interlab_D	NSW_0908_PFA	Broader Management Zone	<0.0001	0.0028	0.0004	0.0032	0.0032	-	<0.0001	<0.0001	<0.0001	-	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.001	<0.001	<0.0002	<0.001	
SD024	16 May 2022	0908_SD024_220516	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0031	0.0012	0.0043	0.0043	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD024	08 Nov 2022	0908_SD024_221108	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.084	0.0059	0.0899	0.0902	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD024	09 May 2023	0908_SD024_230509	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0731	0.0025	0.0756	0.0764	-	<0.0002	<0.0002	0.0008	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD024	20 Nov 2023	0908_SD024_231120	Normal	NSW_0908_PFA	Broader Management Zone	0.0017	0.0248	0.0008	0.0256	0.0286	-	<0.0002	<0.0002	0.0002	-	<0.0002	<0.001	<0.0002	0.0007	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD024	16 Apr 2024	0908_SD024_240416	Normal	NSW_0908_PFA	Broader Management Zone	0.0052	0.0627	0.003	0.0657	0.0798	-	<0.0002	<0.0002	0.0006	-	<0.0002	<0.001	0.0018	0.004	0.0016	0.0006	0.0003	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	27 Sep 2024	0908_SD024_240927	Normal	NSW_0908_PFA	Broader Management Zone	0.0003	0.0103	0.0005	0.0108	0.0111	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD024	02 Apr 2025	0908_SD024_250402	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0066	<0.0002	0.0066	0.0066	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD047	17 Nov 2014	BD03_SD01_171114	Normal	NSW_0908_PFA	On-base	<0.005	0.015	0.017	0.032	-	-	<0.005	-	-	-	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
SD047	17 Nov 2014	QC100_171114	Field_D	NSW_0908_PFA	On-base	<0.005	0.053	0.012	0.065	-	-	<0.005	-	-	-	<0.005	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
SD047	14 Jan 2016	BD03_SD_14012016	Normal	NSW_0908_PFA	On-base	0.0016	0.0377	0.0122	0.0499	-	-	<0.0002	-	-	-	0.0017	-	-	0.0007	0.0006	0.0004	0.0003	<0.0002	<0.0002	<0.0002	<0.001	-	<0.005	<0.001	-	0.0007	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	
SD047	14 Sep 2016	BD03_0.0-0.1_140916	Normal	NSW_0908_PFA	On-base	<0.0005	0.012	0.00052	0.01252	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD047	14 Sep 2016	BD03_0.3-0.4_140916	Normal	NSW_0908_PFA	On-base	<0.0005	0.017	0.00061	0.01761	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD047	16 Dec 2016	BD03_SED_161216	Normal	NSW_0908_PFA	On-base	0.0002	0.0285	0.0046	0.0331	0.0364	-	0.0002	0.0003	0.0004	-	0.0004	<0.001	0.0006	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD047	12 Apr 2018	BD03_SED_13042018	Normal	NSW_0908_PFA	On-base	<0.0002	0.0034	0.0005	0.0039	0.0039	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD047	07 Dec 2018	0908_BD03_SD_181207	Normal	NSW_0908_PFA	On-base	0.0005	0.0187	0.0033	0.022	0.0257	-	<0.0002	0.0002	0.0003	-	0.0002	<0.001	<0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD047	14 Jun 2019	0908_BD03_SD_190614	Normal	NSW_0908_PFA	On-base	0.0006	0.0431	0.0033	0.0464	0.0527	-	0.0005	0.0003	0.0004	-	0.0018	<0.001	0.0002	0.0011	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD047	06 Nov 2019	0908_BD03_SD_191106	Normal	NSW_0908_PFA	On-base	0.0006	0.0317	0.0054	0.0371	0.0449	-	0.0008	0.0006	0.0004	-	<0.0002	<0.001	0.0008	0.0032	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD047	22 May 2020	0908_SD047_200522	Normal	NSW_0908_PFA	On-base	0.0014	0.131	0.0102	0.141	0.162	-	0.0027	0.0007	0.0015	-	0.0015	<0.001	0.0007	0.0023	0.0005	<0.0002	<0.0002	0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD047	27 Nov 2020	0908_SD047_201127	Normal	NSW_0908_PFA	On-base	0.0013	0.0542	0.0074	0.0616	0.0798	-	0.0038	0.0004	0.0011	-	0.0008	0.001	0.0006	0.0017	0.0004	<0.0002	0.0009	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			
SD047	11 May 2021	0908_SD047_210511	Normal	NSW_0908_PFA	On-base	0.0003	0.0416	0.0083	0.0499	0.0561	-	0.0013	0.0002	0.0003	-	0.0005	<0.001	<0.0002	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000																

Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamide ethanol (MeF-OSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamide ethanol (EF-OSE)	
LOR						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	
SD055	10 May 2023	0908_SD055_230510	Normal	NSW_0908_PFA	On-base	<0.0002	0.0137	0.0022	0.0159	0.0167	-	<0.0002	<0.0002	0.0003	-	0.0005	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD055	22 Nov 2023	0908_SD055_231122	Normal	NSW_0908_PFA	On-base	<0.0002	0.0019	0.0006	0.0025	0.0025	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD055	17 Apr 2024	0908_SD055_240417	Normal	NSW_0908_PFA	On-base	<0.0002	0.0071	0.0015	0.0086	0.0091	-	<0.0002	<0.0002	0.0002	-	0.0003	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD055	24 Sep 2024	0908_SD055_240924	Normal	NSW_0908_PFA	On-base	<0.0002	0.0028	0.0005	0.0033	0.0033	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD055	02 Apr 2025	0908_SD055_250402	Normal	NSW_0908_PFA	On-base	<0.0002	0.0109	0.0028	0.0137	0.0172	<0.0005	<0.0002	<0.0002	0.0003	0.0004	0.0023	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD059	19 Jun 2014	DD2_SEDIMENT	Normal	NSW_0908_PFA	Secondary Management Zone	<0.005	0.24	0.042	0.282	-	-	<0.005	-	-	-	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	<0.005	-	-		
SD059	14 Jan 2016	DD2_SD_14012016	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0005	0.0011	-	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	
SD059	14 Jan 2016	QC200_SD_1412016	Field_D	NSW_0908_PFA	Secondary Management Zone	<0.002	<0.002	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	
SD059	14 Dec 2016	DD2_SED_161214	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0066	0.001	0.0076	0.0076	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD059	12 Apr 2018	DD2_SED_12042018	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0018	0.0003	0.0021	0.0026	-	<0.0002	<0.0002	0.0005	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0002	<0.0005			
SD059	06 Dec 2018	0908_DD2_SD_181206	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0006	<0.0002	0.0006	0.0006	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD059	06 Dec 2018	0908_DD2_SD_181206	Normal	NSW_0908_PFA	Secondary Management Zone	-	-	-	0.0008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SD059	13 Jun 2019	0908_DD2_SD_190613	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0008	0.0003	0.0011	0.0011	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD059	05 Nov 2019	0908_DD2_SD_191105	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0153	0.0018	0.0171	0.0193	-	<0.0002	<0.0002	<0.0002	-	0.0013	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD059	04 Jun 2020	0908_SD059_200604	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0124	0.0016	0.014	0.0152	-	<0.0002	<0.0002	<0.0002	-	0.0006	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD059	13 Nov 2020	0908_SD059_201113	Normal	NSW_0908_PFA	Secondary Management Zone	0.0004	0.0662	0.0006	0.0668	0.0685	-	<0.0002	<0.0002	0.0005	-	0.0008	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD059	11 May 2021	0908_SD059_210511	Normal	NSW_0908_PFA	Secondary Management Zone	<0.0002	0.0196	0.0018	0.0214	0.0265	-	<0.0002	<0.0002	0.0003	-	0.0041	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0																

Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides							
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeF-SE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EF-SE)
LOR						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	
SD062	16 May 2022	0908_SD062_220516	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0004	0.0004	0.0008	0.0008	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD062	07 Nov 2022	0908_SD062_221107	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0008	<0.0002	0.0008	0.0008	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD062	11 May 2023	0908_SD062_230511	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0003	<0.0002	0.0003	0.0003	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
SD062	23 Nov 2023	0908_SD062_231123	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0192	0.0011	0.0203	0.0203	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
SD062	22 Apr 2024	0908_SD062_240422	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0096	0.0003	0.0099	0.0099	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
SD062	20 Sep 2024	0908_SD062_240920	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0026	0.0003	0.0029	0.0029	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
SD062	02 Apr 2025	0908_SD062_250402	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0001	0.0002	0.0012	0.0012	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
SD079	14 Jan 2016	TC2_SD_14012016	Normal	NSW_0908_PFA	Broader Management Zone	<0.0005	0.0109	-	0.0109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD079	14 Dec 2016	TC2_SED_161214	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0008	<0.0002	0.0008	0.0008	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD079	12 Apr 2018	TC2_SED_12042018	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0071	0.0011	0.0082	0.0093	-	<0.0002	<0.0002	0.0011	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD079	06 Dec 2018	0908_TC2_SD_181206	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0011	<0.0002	0.0011	0.0013	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD079	06 Dec 2018	0908_TC2_SD_181206	Normal	NSW_0908_PFA	Broader Management Zone	-	-	-	0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD079	13 Jun 2019	0908_TC2_SD_190613	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0063	0.0007	0.007	0.007	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD079	05 Nov 2019	0908_TC2_SD_191105	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0017	0.0004	0.0021	0.0021	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD079	02 Jun 2020	0908_SD079_200602	Normal	NSW_0908_PFA	Broader Management Zone	0.0003	0.0597	0.004	0.0637	0.0652	-	0.0002	<0.0002	0.0006	-	<0.0002	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
SD079	26 Nov 2020	0908_SD079_201126	Normal	NSW_0908_PFA	Broader Management Zone	<0.0002	0.0271	0.0056	0.0327	0.0338	-	0.0003	0.0003	0.0002	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<></							

Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides											
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamideethanol (MeFOSSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamideethanol (EFOSSE)				
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
LOR						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0005	0.0002	0.0005	0.0005	0.0002	0.0005
SD110	16 Dec 2016	LC_B_SED_161216	Normal	NSW_0908_PFA5	On-base	<0.0002	0.0096	0.0002	0.0098	0.0101	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	16 Dec 2016	QC602_SED_161216	Field_D	NSW_0908_PFA5	On-base	<0.0002	0.0203	0.0006	0.0209	0.0216	-	<0.0002	<0.0002	<0.0002	-	0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	16 Dec 2016	QC702_SD_161216	Interlab_D	NSW_0908_PFA5	On-base	<0.002	0.059	0.0025	0.0615	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-			
SD110	12 Apr 2018	LC_B_SED_13042018	Normal	NSW_0908_PFA5	On-base	0.0004	0.0112	0.0007	0.0119	0.0164	-	<0.0002	<0.0002	<0.0002	-	0.001	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0027	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	07 Dec 2018	0908_LC_B_SD_181207	Normal	NSW_0908_PFA5	On-base	0.0004	0.0288	0.0016	0.0304	0.0375	-	<0.0002	<0.0002	<0.0002	-	0.0006	<0.001	0.0005	0.0009	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0045	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	14 Jun 2019	0908_LC_B_SD_190614	Normal	NSW_0908_PFA5	On-base	0.0007	0.0548	0.0023	0.0571	0.0688	-	<0.0002	<0.0002	0.0002	-	0.0039	<0.001	0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0057	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	14 Jun 2019	0908_QC121_190614	Field_D	NSW_0908_PFA5	On-base	<0.0002	0.0137	0.0008	0.0145	0.0176	-	<0.0002	<0.0002	<0.0002	-	0.0011	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0016	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	14 Jun 2019	0908_QC221_190614	Interlab_D	NSW_0908_PFA5	On-base	<0.001	0.0081	0.0012	0.0093	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
SD110	06 Nov 2019	0908_LC_B_SD_191106	Normal	NSW_0908_PFA5OMP	On-base	0.0004	0.0433	0.0026	0.0459	0.0534	-	0.0002	<0.0002	0.0002	-	0.0004	<0.001	0.0009	0.0019	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0033	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	22 May 2020	0908_SD110_200522	Normal	NSW_0908_PFA5OMP	On-base	<0.0002	0.011	0.0007	0.0117	0.0131	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	27 Nov 2020	0908_SD110_201127	Normal	NSW_0908_PFA5OMP	On-base	0.0005	0.0703	0.0028	0.0731	0.081	-	<0.0002	<0.0002	0.0003	-	0.0021	<0.001	0.0007	0.0009	0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0028	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	11 May 2021	0908_SD110_210511	Normal	NSW_0908_PFA5OMP	On-base	0.0011	0.268	0.013	0.281	0.318	-	0.0004	0.0005	0.0015	-	0.0085	<0.001	<0.0002	0.0013	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0006	0.0007	0.0006	<0.0005	<0.0005	<0.0005	0.0211	<0.0005	0.0005	<0.0005	<0.0005	<0.0002	<0.0005				
SD110	16 Nov 2021	0908_SD110_211116	Normal	NSW_0908_PFA5OMP	On-base	<0.0002	0.189	0.0083	0.197	0.259	-	0.0022	0.0003	0.0005	-	0.0028	<0.001	0.0012	0.0044	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0498	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	19 May 2022	0908_SD110_220519	Normal	NSW_0908_PFA5OMP	On-base	<0.0002	0.2	0.0054	0.205	0.238	-	<0.0002	<0.0002	0.0015	-	0.0006	<0.001	<0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0015	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005			
SD110	10 Nov 2022	0908_SD110_221110	Normal	NSW_0908_PFA5OMP	On-base	0.0006	0.0967	0.017	0.114	0.129	-	0.0007	0.0005	0.0007	-	0.0013	0.001	0.0023	0.002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00										

Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic Acids				PFAS - Perfluoroalkyl Sulfonamides								
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamide thanol (MeF-OSF)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamide thanol (EF-OSF)		
LOR						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0002	0.0005	0.0002	0.0005	0.0002	0.0005
SD326	12 Jun 2020	0908_SD326_200612	Normal	NSW_0908_PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0003	0.0081	0.0009	0.009	0.0097	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	13 Nov 2020	0908_SD326_201113	Normal	NSW_0908_PFASOMP	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0057	0.0006	0.0063	0.0063	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	10 May 2021	0908_SD326_210510	Normal	NSW_0908_PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0011	0.0262	0.0021	0.0283	0.0319	-	<0.0002	<0.0002	0.0003	-	0.0006	<0.001	0.0004	0.0009	0.0003	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	26 Nov 2021	0908_SD326_211126	Normal	NSW_0908_PFASOMP	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0133	0.0006	0.0139	0.0143	-	<0.0002	<0.0002	<0.0002	-	0.0002	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	27 May 2022	0908_SD326_220527	Normal	NSW_0908_PFASOMP	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0154	0.0006	0.016	0.016	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	15 Nov 2022	0908_SD326_221115	Normal	NSW_0908_PFASOMP	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0093	0.0005	0.0098	0.0098	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	16 May 2023	0908_SD326_230516	Normal	NSW_0908_PFASOMP_23	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0102	0.0004	0.0106	0.0106	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	27 Nov 2023	0908_SD326_231127	Normal	NSW_0908_PFASOMP_23	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0114	0.0004	0.0118	0.0118	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	23 Apr 2024	0908_SD326_240423	Normal	NSW_0908_PFASOMP_24	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0127	0.0004	0.0131	0.0131	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	20 Sep 2024	0908_SD326_240920	Normal	NSW_0908_PFASOMP_24	Other: Fullerton Cove (tidal gate outlet)	0.0004	0.0233	0.0016	0.0249	0.0258	-	<0.0002	<0.0002	0.0002	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD326	17 Apr 2025	0908_SD326_250417	Normal	NSW_0908_PFASOMP_25	Other: Fullerton Cove (tidal gate outlet)	0.0056	0.164	0.0056	0.17	0.179	<0.0005	<0.0002	<0.0002	0.0009	<0.0002	<0.0002	<0.001	0.0004	0.0006	0.0007	0.0009	0.0004	0.0003	<0.0002	<0.0002	<0.0006	<0.0005	<0.0005	<0.0005	<0.0002	<0.0006	<0.0002	<0.0006	<0.0002	<0.0006	<0.0002	<0.0006		
SD333	22 Apr 2024	0908_SD333_240422	Normal	NSW_0908_PFASOMP_24	Primary Management Zone	0.0012	0.123	0.0248	0.148	0.181	-	0.0006	0.0017	0.0027	-	0.0219	<0.001	0.0007	0.0019	0.0007	<0.0002	<0.0002	<0.0002	0.0004	0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD333	19 Sep 2024	0908_SD333_240919	Normal	NSW_0908_PFASOMP_24	Primary Management Zone	<0.0002	0.0167	0.0019	0.0186	0.0251	-	<0.0002	<0.0002	<0.0002	-	0.0054	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD333	16 Apr 2025	0908_SD333_250416	Normal	NSW_0908_PFASOMP_25	Primary Management Zone	0.0005	0.0165	0.0104	0.0269	0.0318	<0.0005	<0.0002	0.0005	0.0006	<0.0002	<0.0002	<0.001	<0.0002	0.0029	0.0004	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD600	25 Nov 2022	0908_SD600_221125	Normal	NSW_0908_PFASOMP	Secondary Management Zone	<0.0002	0.0164	0.0014	0.0178	0.0181	-	<0.0002	<0.0002	<0.0002	-	<0.0002	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD600	15 May 2023	0908_SD600_230515	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	<0.0002	0.0239	0.0007	0.0246	0.0255	-	<0.0002	<0.0002	<0.0002	-	0.0009	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD600	27 Nov 2023	0908_SD600_231127	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	<0.0002	0.051	0.0016	0.0526	0.0534	-	<0.0002	<0.0002	0.0004	-	0.0004	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD600	22 Apr 2024	0908_SD600_240422	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	0.0003	0.0142	0.0026	0.0168	0.0186	-	<0.0002	0.0002	0.0003	-	<0.0002	<0.001	0.0002	0.0006	0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD600	19 Sep 2024	0908_SD600_240919	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	0.0006	0.0973	0.0056	0.103	0.109	-	0.0003	0.0003	0.001	-	0.003	<0.001	0.0003	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD600	10 Apr 2025	0908_SD600_250410	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002	0.0083	0.0014	0.0097	0.0097	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		

Notes
LOR Limit of Reporting
Normal Primary sample
Field_D Intra-laboratory duplicate sample
Interlab_D Inter-laboratory duplicate sample

Appendix C

Calibration Certificates

Certificate of Service and Calibration
Interface Meter
Heron H.Oil

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	
Instrument	Heron H.Oil Interface Meter (30m)
Serial Number	01-09087
Client Name	(AECOM)
Project Number	60739111-1.10.1

Instrument Check			
Item	Test	Test Passed	Comments
9V Battery	Klein Tools MM300 Multimeter	✓	Battery voltage reading above 7.9V
Battery Box	Check	✓	No damage
Face and Back Plates	Check	✓	No damage
Thumb Screws	Check	✓	Rubber ends intact
Tape Hangar/Protector	Check	✓	No damage
On/Off Button	Operation	✓	Button is functional
Buzzer	Operation	✓	Intermittent tone in H ₂ O, solid tone in product
LED Signal Light	Operation	✓	LED light functional – green and red
Probe	Operation/Check	✓	Decontaminated, cleaned and tested
Tape	Condition/Check	✓	Decontaminated and cleaned, no damage
Connection	Check	✓	Probe and link connected correctly and tightly
PCB	Operation	✓	Unit is fully functional
Electronics Panel	Orientation	✓	Correctly aligned

Instrument Readings		
Product	Buzzer	LED Light
H ₂ O	Intermittent	Blinking – Red
Petroleum	Solid	Steady – Red

Declaration
WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The interface meter was decontaminated, cleaned and tested with a mixture of tap water and petrol, shielded from ambient light.

Checked By	
Calibration Date	25/03/2025
Calibration Due	25/09/2025

Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	+61 405 241 484
Contact Name	
Instrument	YSI Pro Quatro Water Quality Meter w/ 1m Quatro Cable
Serial Number	24L001544
Client Name	(AECOM)
Project Number	60739111-1.10.1
Comments	-

Instrument Check

Item	Test	Test Passed	Comments
2 x Alkaline C-size Batteries	Klein Tools MM300 Multimeter	✓	Both batteries reading above 2.9V
Battery Saver Function	Operation	✓	Automatically turns off after 60 minutes if idle
Unit Display	Operation	✓	Screen visible, no damage
Keypad	Operation	✓	Responsive, no damage
Connection Port and Cable	Condition/Check	✓	Clean, no damage
Monitor Housing	Condition/Check	✓	No damage
Firmware	Version	✓	4.0.0
pH Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
pH millivolts for pH 7.00	Calibration	✓	pH 7.00 calibration range between 0 mV $\pm$ 50 mV
pH millivolts for pH 4.00	Calibration	✓	pH 4 mV range +165 to +180 from 7 buffer mV value
pH slope	Calibration	✓	Range between 55 to 60 mV/pH (ideal value 59 mV)
Response time < 90 seconds	Calibration	✓	Responds to correct value within 90 seconds
ORP Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
ORP Reading	Calibration	✓	Within $\pm$ 80 mV of reference Zobell Reading
Response time < 90 seconds	Calibration	✓	Responds to correct value within 90 seconds
Conductivity/Temp Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
Conductivity Cell	Calibration	✓	Conductivity cell constant 5.0 $\pm$ 1.0 in GLP file
Clean Sensor Readings	Calibration	✓	Clean sensor reads less than 3 uS/cm in dry air
Dissolved Oxygen Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
DO Cap	Condition/Calibration	✓	1.25 mil PE membrane (yellow membrane)
DO Sensor in Use	Condition	✓	Polarographic DO sensor
DO Sensor Value	Calibration	✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA

Instrument Readings

Parameter	Standard Used	Reference No.	Calibration Value	Observed	Actual	Units
Temperature	Centre 370 Thermometer	Room Temp.	23.8	24.4	23.8	°C
pH	pH 4.00	417183	4.01	4.04	4.01	pH
pH	pH 7.00	419528	7.00	7.05	7.00	pH
Conductivity	2760 μ S/cm at 25°C	399819	2760	2823	2760	μ S/cm
ORP (Ref. check only)	Zobell A & B	420448/418958	231.6	230.8	231.6	mV
Zero Dissolved O ₂	NaSO ₃ in Distilled H ₂ O	426184	0.0	0.2	0.0	%
100% Dissolved O ₂	100% Air Saturated H ₂ O	Fresh Air	100.0	98.0	100.0	%

Declaration

WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The calibration data supplied was obtained in accordance with manufacturer's specifications using solutions of known values.

Calibrated By	
Calibration Date	25/03/2025
Calibration Due	25/09/2025

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP		Project Number:	60739111	
Project Location:	Williamtown		Client:	DoD	
PM Name:	[REDACTED]		Fieldwork Staff Name:	[REDACTED]	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific				
Make and Model:	Pro Quatro Pro-Series 451				
Serial Number:	24L001544				

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	1/4/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2760		
Calibration Reading:	4.02	7.03	2566		
Calibration Temperature:	21.4	21.2	22.0		

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

[REDACTED]

Fieldwork Staff Signature

1/4/25

Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamstown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	Pro Quest Pro-Series (YSI)		
Serial Number:	294001544		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	2/4/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00 / 7.00	10.00	2760 µS/cm		
Calibration Reading:	4.04 / 6.94	9.93	2564		
Calibration Temperature:	21.0°C	21.0°C	21.9°C		

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.




Fieldwork Staff Signature _____ Date _____

Distribution: Project Central File

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:		WLM OMP		Project Number:		60739111	
Project Location:		Williamtown		Client:		DoD	
PM Name:				Fieldwork Staff Name:			
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.							
INSTRUMENT DETAILS							
Supplier:		WAM Scientific.					
Make and Model:		Pro Aquatro (YSI)					
Serial Number:		244001544.					
CALIBRATION							
CALIBRATE WITH CALIBRATION SOLUTIONS							
Date and Time:		3/4/25					
Parameter		Acidity		Conductivity		Dissolved Oxygen	
Units		pH	pH	µS/cm	ppm	ppm	
Calibration Standard Concentration:		9.0	10.00	2760 @ 25°C			
Calibration Reading:		3.95	10.03	2562			
Calibration Temperature:		21.1°C	21.1°C	21.1°C			
ONGOING CHECKS							
BUMP TEST WITH CALIBRATION SOLUTION							
Date and Time:							
Parameter		Acidity		Conductivity		Dissolved Oxygen	
Units		pH	pH	µS/cm	ppm	ppm	
Calibration Standard Concentration:							
Bump Test Reading:							
Bump Test Temperature:							
COMMENTS							
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.							
Approval and Distribution							
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.							
Fieldwork Staff Signature				Date			
Distribution: Project Central File				03/04/2025			

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111		
Project Location:	Williamstown	Client:	DoD		
PM Name:		Fieldwork Staff Name:			

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	DUAM Scientific				
Make and Model:	Pro OMP - Pro Series (YSI)				
Serial Number:	242001544				

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	4/4/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00 / 7.00	10.00	2760 @ 25°C		
Calibration Reading:	4.02 / 7.04	10.01	264.2		
Calibration Temperature:	22.5°C	22.5°C	22.9°C		

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

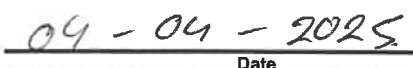
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

Fieldwork Staff Signature _____ Date _____

Distribution: Project Central File

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111		
Project Location:	Williamtown	Client:	DoD		
PM Name:	[REDACTED]	Fieldwork Staff Name:	[REDACTED]		
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.					
INSTRUMENT DETAILS					
Supplier:	WAM Scientific				
Make and Model:	Pro Quatro YSI				
Serial Number:	24L001544				
CALIBRATION					
CALIBRATE WITH CALIBRATION SOLUTIONS					
Date and Time:	7/4/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2549	0.00	/
Calibration Reading:	4.09	7.04	2547	0.35	/
Calibration Temperature:	21.1	21.2	21.3	21.0	/
ONGOING CHECKS					
BUMP TEST WITH CALIBRATION SOLUTION					
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	/	/	/	/	/
Bump Test Reading:	/	/	/	/	/
Bump Test Temperature:	/	/	/	/	/
COMMENTS					
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.					
Approval and Distribution					
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff. [Signature] Fieldwork Staff Signature 7/4/25 Date					
Distribution: Project Central File					

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamtown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	Pro Quattro 4S1		
Serial Number:	24L001544		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	8/4/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2549	0.00	
Calibration Reading:	4.07	7.02	2544	0.020	
Calibration Temperature:	20.8	21.1	21.3	21.0	

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

_____ 8/4/25
 (Fieldwork Staff Signature) Date

Distribution: Project Central File

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111		
Project Location:	Williamtown	Client:	DoD		
PM Name:	[REDACTED]	Fieldwork Staff Name:	[REDACTED]		
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.					
INSTRUMENT DETAILS					
Supplier:	WAM Scientific				
Make and Model:	Pro Quatro 451				
Serial Number:	2AL001544				
CALIBRATION					
CALIBRATE WITH CALIBRATION SOLUTIONS					
Date and Time:	9/4/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2549	0.00	/
Calibration Reading:	4.07	7.05	2545	0.58	/
Calibration Temperature:	21.2	21.4	21.3	21.1	/
ONGOING CHECKS					
BUMP TEST WITH CALIBRATION SOLUTION					
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	/	/	/	/	/
Bump Test Reading:	/	/	/	/	/
Bump Test Temperature:	/	/	/	/	/
COMMENTS					
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.					
Approval and Distribution					
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.					
[REDACTED] Fieldwork Staff Signature			9/4/25 Date		
Distribution: Project Central File..					

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:		WLM OMP	Project Number:		60739111
Project Location:		Williamtown	Client:		DoD
PM Name:		[REDACTED]	Fieldwork Staff Name:		[REDACTED]
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.					
INSTRUMENT DETAILS					
Supplier:		WAM Scientific			
Make and Model:		Pro Quatro 4SI			
Serial Number:		24L001544			
CALIBRATION					
CALIBRATE WITH CALIBRATION SOLUTIONS					
Date and Time:		10/4/25			
Parameter		Acidity		Conductivity	
Units		pH	pH	µS/cm	Dissolved Oxygen ppm ppm
Calibration Standard Concentration:		4.00	7.00	2549	0.00
Calibration Reading:		4.05	7.03	2555	0.65
Calibration Temperature:		21.5	21.3	21.0	21.0
ONGOING CHECKS					
BUMP TEST WITH CALIBRATION SOLUTION					
Date and Time:					
Parameter		Acidity		Conductivity	
Units		pH	pH	µS/cm	Dissolved Oxygen ppm ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					
COMMENTS					
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.					
Approval and Distribution					
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.					
[REDACTED] Fieldwork Staff Signature			10/4/25 Date		
Distribution: Project Central File					

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamstown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	Pro Quatro 4SI		
Serial Number:	24L001544		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	11/4/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2760	0.00	
Calibration Reading:	4.05	7.07	2758	0.25	
Calibration Temperature:	22.0	22.1	22.3	21.8	

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

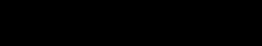
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.


11/4/25

Fieldwork Staff Signature
Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111	
Project Location:	Williamtown	Client:	DoD	
PM Name:		Fieldwork Staff Name:		

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific			
Make and Model:	YSI Professional Series			
Serial Number:	246001546			

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	14-4-2025 0800				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00 / 7.00	10.00	2760@25°C		
Calibration Reading:	3.92 / 6.99	10.04	2690		
Calibration Temperature:	23.4°C	23.4°C	24.1°C		

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

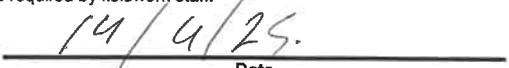
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

Fieldwork Staff Signature _____ Date _____

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamtown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	YSI Professional Series		
Serial Number:	296001540		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	15-09-2025 0800				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00 / 7.00	10.00	2760 @ 25°C		
Calibration Reading:	9.51, 6.95	10.07	2561		
Calibration Temperature:	23.3°C	23.3°C	23.5°C		

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

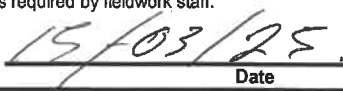
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

Fieldwork Staff Signature _____ Date _____

Distribution: Project Central File

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111		
Project Location:	Williamtown	Client:	DoD		
PM Name:	[REDACTED]	Fieldwork Staff Name:	[REDACTED]		
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.					
INSTRUMENT DETAILS					
Supplier:	WLM Scientific				
Make and Model:	YSI Professional Series				
Serial Number:					
CALIBRATION					
CALIBRATE WITH CALIBRATION SOLUTIONS					
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00 / 7.00	10.00	2760 @ 25°C		
Calibration Reading:	4.04 / 7.09	10.02	2580		
Calibration Temperature:	21.5°C	21.5°C	21.2°C		
ONGOING CHECKS					
BUMP TEST WITH CALIBRATION SOLUTION					
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					
COMMENTS					
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.					
Approval and Distribution					
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.					
[REDACTED SIGNATURE]			16/4/25		
Fieldwork Staff Signature			Date		
Distribution: Project Central File					

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP		Project Number:	60739111	
Project Location:	Williamtown		Client:	DoD	
PM Name:	[REDACTED]		Fieldwork Staff Name:	[REDACTED]	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific				
Make and Model:	YSI Pro Quatro				
Serial Number:	24L001544				

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	17/4/25 8:05				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4	7	2549	0.00	/
Calibration Reading:	4.10	6.77	2184	0.84	/
Calibration Temperature:	21.1	21.2	21.0	21.4	/

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:	17/4/25 8:15				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2549	/	/
Bump Test Reading:	4.00	7.01	2549	/	/
Bump Test Temperature:	21.1	21.1	21.0	/	/

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

[REDACTED]

Fieldwork Staff Signature

17/4/25

Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM Ad HOC		Project Number:	60739111	
Project Location:	Williamstown		Client:	DoD	
PM Name:			Fieldwork Staff Name:		

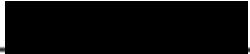
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS					
Supplier:	WAM Scientific				
Make and Model:	YSI Pro Quatro				
Serial Number:	229103295				

CALIBRATION					
CALIBRATE WITH CALIBRATION SOLUTIONS					
Date and Time:	26/5/25 7:45am				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2760		
Calibration Reading:	4.01	7.03	2759		
Calibration Temperature:	20.8	20.7	21.0		

ONGOING CHECKS					
BUMP TEST WITH CALIBRATION SOLUTION					
Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS					
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.					

Approval and Distribution					
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.					
 Fieldwork Staff Signature			26/5/25 Date		

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM / SMA ad hoc		Project Number:	60739111	
Project Location:	Williamstown / Sintelabo		Client:	DoD	
PM Name:	[REDACTED]		Fieldwork Staff Name:	[REDACTED]	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific				
Make and Model:	YSI Pro Quatro				
Serial Number:	22G103295				

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	27/5/25 7:45am				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.00	7.00	2760		
Calibration Reading:	4.03	7.04	2755		
Calibration Temperature:	20.7	20.9	21.0		

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

[REDACTED]

Fieldwork Staff Signature

27/5/25

Date

Distribution: Project Central File

Appendix D

Data Validation

DATA VALIDATION REPORT

Project number:	60739111	Validation by:	BY	Date:	23/06/2025
Client:	Department of Defence	Data verified by:	ST	Date:	24/06/2025
Site:	RAAF Base Williamtown				
Matrix type:	Groundwater, Bore water, Surface water and Sediment				
Primary samples:	133 Groundwater samples, 6 bore water samples, 25 Surface water samples and 26 Sediment samples				
Laboratory:	Primary: ALS, Secondary: Envirolab				
Lab reference:	ALS: ES2509680, ES2509681, ES2509682, ES2510538, ES2510539, ES2510540, ES2510542, ES2511271, ES2511273, ES2511275, ES2511276, ES2511277, ES2511279, ES2511281, ES2511284, ES2511286, ES2511293, ES2511299, ES2515729, ES2513902, ES2513709, ES2515730, ES2515731, ES2515837, ES2517305, and ES2517306 Reanalysis: ES2511276, ES2511279, ES2519162, and ES2519163 Envirolab: 378731-A and 381865				
Key Issues:	No QA/QC issues were identified in the field or laboratory datasets that could have a material implication to decision-making on the project.				
Field Quality Assurance and Quality Control					
Field DQOs and DQIs	The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (AECOM, 2025).				
Sampling personnel	The main sampling event was conducted between 01/04/2025 and 17/04/2025, with additional sampling undertaken on 26/05/2025, 27/05/2025 and 10/06/2025. The sampling was conducted by suitably qualified and experienced AECOM Environmental Scientists and Engineers.				
Sampling Methodology	All water and sediment samples were collected in accordance with the methodology outlined in the SAQP (AECOM, 2025). After each sample was collected, reusable equipment was decontaminated using Liquinox and potable water, and the consumables (nitrile gloves and HydraSleeve™ material) were disposed of in waste bins.				
Chain of Custody (COC)	All samples collected were reported on the Chain of Custody documents (COC) and subsequent email amendments and analysed for requested analytes.				
Rinsate Blank	Rinsate blank samples were collected at a frequency of 1 per day of sampling per sampling team where equipment was re-used and decontaminated between sample points. Rinsate blank samples were either collected from the final rinse of the interface probe or the trowel, using laboratory-supplied de-ionised water. A total of 13 rinsate blank samples were collected.				
Frequency of field QC	Field duplicates (intra-laboratory duplicates) were collected at/above the required frequency of 1 in 10 primary samples (10%) for water samples and 1 in 20 primary samples (5%) for sediment samples. Overall, 19 field duplicates and 18 field triplicates were collected for 192 primary samples, these comprised: 17 water field duplicates and 17 water field triplicates, which were collected for 164 primary water samples (10.4 % frequency for both) 2 sediment field duplicates and 2 sediment field triplicates, which were collected for 26 primary sediment samples in total (7.7% frequency for both).				
Handling and preservation	All samples were received at the primary laboratory in appropriate containers with temperatures between 0.1°C to 3.6°C (with ice present), within the recommended temperature range (<6°C). Samples received at the secondary laboratory arrived in appropriate containers within the recommended range (<6°C) with the exception of 378731-A. The temperature for 378731-A was recorded as 6.3°C (with ice present).				
Calibration of equipment	Measurements of water geochemical parameters were undertaken using YSI Professional Plus water quality meters, which were calibrated by the supplier prior to use, in accordance with the manufacturer's instructions and bump tested daily by the field personnel. Measurements of depth to groundwater were undertaken using interface probes, which were serviced by the supplier prior to use. All equipment calibration and service certificates are presented in Appendix C.				

DATA VALIDATION REPORT						
Laboratory QA/QC						
Laboratory DQOs and DQIs	The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (AECOM, 2025).					
Tests requested/reported	All samples were analysed for per- and polyfluoroalkyl substances (PFAS) extended suite, at the standard level of detection. All sample requests for analysis are reported on the Chain of Custody (COC) and subsequent email amendments.					
Holding time compliance	All samples were extracted and analysed by the laboratory within the recommended holding times.					
Laboratory accreditation	The primary laboratory analysis was conducted by ALS Environmental Pty Ltd (Sydney) a National Association of Testing Authorities (NATA) accredited laboratory (Accreditation No. 825). The secondary samples were analysed at Envirolab Services, also a NATA accredited laboratory (accreditation number 2901).					
Frequency of laboratory QC	The primary laboratory ALS reported a sufficient frequency of quality control samples to assess whether the results have been reported with acceptable accuracy and precision, with the exception of the following: ES2509682: Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS – 9.59%					
Method Blank	All method blank concentrations were reported <LOR (limit of reporting) for the analytes tested, meeting the project requirements. This is presented in the Quality Control Reports for both laboratories.					
Laboratory duplicate RPDs	The reported Relative Percentage Differences (RPDs) for laboratory duplicates were within laboratory control limits. The RPDs for laboratory duplicates are presented in the Quality Control Reports for both laboratories.					
LCS recovery	Laboratory control spike (LCS) recoveries were reported within control limits. This is presented in the Quality Control Reports for both laboratories.					
Matrix spike recovery	Matrix spike (MS) recoveries were reported within control limits, with the exception of matrix spike recoveries that were not determined for the following: - ES2509682: Perfluorohexane sulfonic acid (PFHxS), 0908_SW059_250402 - ES2509682: Perfluorooctane sulfonic acid (PFOS), 0908_MW109D_250404 - ES2509682: Perfluorooctane sulfonic acid (PFOS), 0908_SW059_250402 - ES2510538: Perfluorooctane sulfonic acid (PFOS), 0908_SD600_250410 - ES2510539: Perfluorooctane sulfonic acid (PFOS), 0908_QC110_250407 - ES2510540: Perfluorooctane sulfonic acid (PFOS), Anonymous These non-determinations were due to background levels being greater than or equal to four times spike levels, which do not reflect method bias or affect data interpretation.					
Surrogate spike recovery	The reported surrogate spike recoveries were within laboratory control limits.					
QA/QC Data Evaluation						
Comparison of Field Observations and Laboratory Results	No anomalies between field observations and analytical results were noted.					
Anomalous data	Re-analysis was conducted for samples collected at MW231S, MW262S, MW538, and SD326, following the initial reporting of PFAS concentrations outside of historical ranges. The re-analysis (reported in batches ES2511276, ES2511279, ES2519162, and ES2519163) broadly confirmed the originally reported results (see table below). Given the laboratory did not identify any procedural or analytical errors pertaining to their analysis, the most conservative, originally reported concentrations have been retained and used in the assessment.					
	Location Code	Analysis	PFOA Result	PFOS Result	PFHxS Result	PFOS+PFHxS Result
	MW231S	Original	<0.01	0.08	0.02	0.1
		Re-analysis	<0.01	0.07	0.02	0.09
	SD326	Original	0.0056	0.164	0.0056	0.17
		Re-analysis	0.0004	0.0357	0.0011	0.0368

DATA VALIDATION REPORT						
	MW262S	Original	0.002	0.032	0.019	0.051
		Re-analysis	<0.002	0.033	0.016	0.049
	MW538	Original	0.011	0.234	0.202	0.436
		Re-analysis	0.011	0.235	0.195	0.430
Data transcription	A check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and the tables generated by AECOM.					
Limits of reporting	The laboratory LORs were sufficiently low to enable assessment against adopted guideline criteria, with the following exceptions: - PFAS NEMP Freshwater 99% species protection (HEPA, 2025) for PFOS values - Australian Drinking Water Guidelines (NHMRC, 2025) for PFOS value, where analysed at the standard LOR.					
Rinsate Blank sample results	The concentrations of PFAS in the Rinsate Blank samples (Table D3) were below the LOR, indicating decontamination procedures were adequate.					
RPDs for Field Duplicates / Triplicates	RPDs for field duplicates (intra-laboratory duplicates) and triplicates (inter-laboratory duplicates), where calculable were reported within acceptable limits ($\leq 30\%$, or $\leq 50\%$ for results 10-20 x LOR, or No Limit for results <10 x LOR) (see Table D1 and Table D2), with the exception of: Sediment (Table D1) - Individual PFAS compound RPDs for intra-lab duplicates ranged between 23% and 52%. - Individual PFAS compound RPDs for inter-lab duplicates which ranged between 43% and 62%. RPD exceedances were reported in two duplicate pairs (for SD081 and SD011) for sediment matrices. The elevated RPD for sediment is likely to be attributed to the heterogeneous nature of the sediment sampled and given that the concentrations are within the same order of magnitude it is therefore considered acceptable. Note that when sampling, care was taken to ensure potential heterogeneity was reduced, by dividing the sample collected between primary, inter, and intra-laboratory jars. Water (Table D2) - Individual PFAS compound RPDs for intra-lab duplicates ranged between 22% and 100%. - Individual PFAS compound RPDs for inter-lab duplicates which ranged between 43% and 100%. RPD exceedances were reported in 6 duplicate pair samples (for MW132, MW161D, MW163, MW344, MW441 and MW829) for water matrices. However, given that the concentrations between the primary and duplicate (inter and intra duplicate) samples were within same order of magnitude, the RPD exceedances are considered acceptable.					
Overall Assessment						
Data validation procedure employed in the assessment of the field and laboratory QA/QC data indicated that the reported analytical results are representative of the sample locations and that the overall quality of the analytical data produced is acceptably reliable for the purpose of this report.						

Attached:

Table D1 – Sediment Duplicate RPDs

Table D2 – Water Duplicate RPDs

Table D3 – Rinsate Blank Results

Table D1 - Sediment Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2509680		ES2509680		RPD	ES2509680		378731-A		RPD	ES2510540		ES2510540		RPD	ES2510540		378731-A		RPD
				0908_SD081_250402		0908_QC101_250402			0908_SD081_250402		0908_QC201_250402			0908_SD011_250407		0908_QC109_250407			0908_SD011_250407		0908_QC209_250407		
				Soil		Soil			Soil		Soil			Soil		Soil			Soil		Soil		
				02 Apr 2025		02 Apr 2025			02 Apr 2025		02 Apr 2025			07 Apr 2025		07 Apr 2025			07 Apr 2025		07 Apr 2025		
	Unit	LOR	RPD																				
PFAS																							
Perfluorooctanoic acid (PFOA)	mg/kg	0.0001		<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	0.0003	nc	<0.0002	0.0001	nc	<0.0002	0.0001	nc	<0.0002	0.0001	nc	<0.0002	
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0001		0.0118	0.0092	25	0.0118	0.012	2	0.0195	0.0234	18	0.0195	0.012	48				0.0195	0.012	48		
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0001		0.0017	0.0010	52	0.0017	0.0009	62	0.0006	0.0009	40	0.0006	0.0006	0				0.0006	0.0006	0		
Sum of PFHxS and PFOS	mg/kg	0.0001		0.0135	0.0102	28	0.0135	0.013	4	0.0201	0.0243	19	0.0201	0.013	43				0.0201	0.013	43		
Sum of PFAS	mg/kg	0.0001		0.0135	0.0102	28	0.0135	0.013	4	0.0201	0.0254	23	0.0201	0.013	43				0.0201	0.013	43		
PFAS - Perfluoroalkyl Sulfonic Acids																							
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.0005		<0.0005	<0.0005	nc	<0.0005	-	nc	<0.0005	<0.0005	nc	<0.0005	-	nc				<0.0005	-	nc		
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0001		<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc				<0.0002	<0.0001	nc		
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0001		<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc				<0.0002	<0.0001	nc		
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0001		<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc				<0.0002	<0.0001	nc		
Perfluorononanesulfonic acid (PFNS)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	-	nc	<0.0002	0.0002	nc	<0.0002	-	nc				<0.0002	-	nc		
Perfluorodecane sulfonic acid (PFDS)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc				<0.0002	<0.0002	nc		
PFAS - Perfluoroalkyl Carboxylic Acids						nc																	
Perfluorobutanoic acid (PFBA)	mg/kg	0.0002		<0.001	<0.001	nc	<0.001	<0.0002	nc	<0.001	<0.001	nc	<0.001	<0.0002	nc				<0.001	<0.0002	nc		
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	0.0002	nc	<0.0002	<0.0002	nc				<0.0002	<0.0002	nc		
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0001		<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	0.0004	nc	<0.0002	0.0003	nc				<0.0002	0.0003	nc		
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0001		<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc				<0.0002	<0.0001	nc		
Perfluorononanoic acid (PFNA)	mg/kg	0.0001		<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc				<0.0002	<0.0001	nc		
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc				<0.0002	<0.0005	nc		
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc				<0.0002	<0.0005	nc		
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc				<0.0002	<0.0005	nc		
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc				<0.0002	<0.0005	nc		
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005		<0.0005	<0.0005	nc	<0.0005	<0.005	nc	<0.0005	<0.0005	nc	<0.0005	<0.005	nc				<0.0005	<0.005	nc		
PFAS - (n:2) Fluorotelomer Sulfonic Acids						nc						nc			nc						nc		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0001		<0.0005	<0.0005	nc	<0.0005	<0.0001	nc	<0.0005	<0.0005	nc	<0.0005	<0.0001	nc				<0.0005	<0.0001	nc		
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0001		<0.0005	<0.0005	nc	<0.0005	<0.0001	nc	<0.0005	<0.0005	nc	<0.0005	<0.0001	nc				<0.0005	<0.0001	nc		
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0002		<0.0005	<0.0005	nc	<0.0005	<0.0002	nc	<0.0005	<0.0005	nc	<0.0005	<0.0002	nc				<0.0005	<0.0002	nc		
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0002		<0.0005	<0.0005	nc	<0.0005	<0.0002	nc	<0.0005	<0.0005	nc	<0.0005	<0.0002	nc				<0.0005	<0.0002	nc		
PFAS - Perfluoroalkyl Sulfonamides						nc																	
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.001	nc	<0.0002	<0.0002	nc	<0.0002	<0.001	nc				<0.0002	<0.001	nc		
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005		<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	nc	<0.0005	<0.001	nc				<0.0005	<0.001	nc		
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc				<0.0002	<0.0002	nc		
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	mg/kg	0.0005		<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	nc	<0.0005	<0.001	nc				<0.0005	<0.001	nc		
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005		<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	nc	<0.0005	<0.001	nc				<0.0005	<0.001	nc		
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002		<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc				<0.0002	<0.0002	nc		
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005		<0.0005	<0.0005	nc	<0.0005	<0.005	nc	<0.0005	<0.0005	nc	<0.0005	<0.005	nc				<0.0005	<0.005	nc		

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2509682		ES2509682		RPD	ES2509682		378731-A		RPD	ES2509682		ES2509682		RPD	ES2509682		ES2509682		RPD
				0908 MW202D_250401		0908 QC100_250401			0908 MW202D_250401		0908 QC200_250401			0908 SW108_250402		0908 QC102_250402			0908 MW146AD_250403		0908 QC103_250403		
				Water		Water			Water		Water			Water		Water			Water		Water		
				01 Apr 2025		01 Apr 2025			01 Apr 2025		01 Apr 2025			02 Apr 2025		02 Apr 2025			03 Apr 2025		03 Apr 2025		
	Unit	LOR	RPD																				
PFAS																							
Perfluorooctanoic acid (PFOA)	µg/L	0.001		<0.01	<0.01	nc	<0.01	<0.01	nc	0.08	0.09	12	<0.002	<0.002	nc								
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		0.04	0.05	22	0.04	0.04	0	3.95	4.12	4	0.005	0.005	0								
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		0.02	0.03	40	0.02	0.02	0	0.75	0.70	7	<0.002	<0.002	nc								
Sum of PFHxS and PFOS	µg/L	0.001		0.06	0.08	29	0.06	0.06	0	4.70	4.82	3	0.005	0.005	0								
Sum of PFAS	µg/L	0.001		0.06	0.08	29	0.06	0.06	0	5.57	5.72	3	0.005	0.005	0								
PFAS - Perfluoroalkyl Sulfonic Acids																							
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.02	<0.02	nc	<0.02	-	nc	<0.02	<0.02	nc	<0.01	<0.01	nc								
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.02	<0.02	nc	<0.02	<0.01	nc	0.03	0.03	0	<0.002	<0.002	nc								
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.02	<0.02	nc	<0.02	<0.01	nc	0.05	0.05	0	<0.002	<0.002	nc								
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		<0.02	<0.02	nc	<0.02	<0.01	nc	0.06	0.05	18	<0.002	<0.002	nc								
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		<0.02	<0.02	nc	<0.02	-	nc	0.03	0.03	0	-	-	nc								
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
PFAS - Perfluoroalkyl Carboxylic Acids						nc																	
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.05	<0.05	nc	<0.05	-	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.1	<0.1	nc	<0.1	<0.02	nc	<0.1	<0.1	nc	<0.01	<0.01	nc								
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	0.09	0.10	11	<0.002	<0.002	nc								
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		<0.02	<0.02	nc	<0.02	<0.01	nc	0.27	0.24	12	<0.002	<0.002	nc								
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.02	<0.02	nc	<0.02	<0.01	nc	0.06	0.05	18	<0.002	<0.002	nc								
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.02	<0.02	nc	<0.02	<0.01	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.05	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
PFAS - (n:2) Fluorotelomer Sulfonic Acids																							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.05	<0.05	nc	<0.05	<0.01	nc	0.20	0.26	26	<0.005	<0.005	nc								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
PFAS - Perfluoroalkyl Sulfonamides																							
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.1	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc	<0.005	<0.005	nc								

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2509682		378731-A		RPD	ES2509682		ES2509682		RPD	ES2509682		ES2509682		RPD
				0908_MW146AD_250403		0908_QC203_250403			0908_MW897S_250403		0908_QC104_250403			0908_MW255D_250403		0908_QC105_250403		
				Water		Water			Water		Water			Water		Water		
				03 Apr 2025		03 Apr 2025			03 Apr 2025		03 Apr 2025			03 Apr 2025		03 Apr 2025		
	Unit	LOR	RPD															
PFAS																		
Perfluorooctanoic acid (PFOA)	µg/L	0.001		<0.002	<0.001	nc	<0.01	<0.01	nc	<0.01	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		0.005	0.004	22	0.17	0.17	0	0.17	0.16	6	<0.002	<0.002	nc	<0.002	nc	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		<0.002	0.001	nc	0.04	0.04	0	0.04	0.05	22	<0.002	<0.002	nc	<0.002	nc	
Sum of PFHxS and PFOS	µg/L	0.001		0.005	0.005	0	0.21	0.21	0	0.21	0.21	0	<0.002	<0.002	nc	<0.002	nc	
Sum of PFAS	µg/L	0.001		0.005	0.005	0	0.21	0.21	0	0.21	0.21	0	<0.002	<0.002	nc	<0.002	nc	
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.01	-	nc	<0.02	<0.02	nc	<0.02	-	nc	<0.01	<0.01	nc	<0.01	nc	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.002	<0.001	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.002	<0.001	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		<0.002	<0.001	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		-	-	nc	<0.02	<0.02	nc	<0.02	-	nc	-	-	nc	-	nc	
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.002	<0.002	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	nc	
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.005	-	nc	<0.05	<0.05	nc	<0.05	-	nc	<0.005	<0.005	nc	<0.005	nc	
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.01	<0.01	nc	<0.1	<0.1	nc	<0.1	<0.02	nc	<0.01	<0.01	nc	<0.01	nc	
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.002	<0.002	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		<0.002	<0.001	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.002	<0.001	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.002	<0.001	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.002	<0.002	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.002	<0.002	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.002	<0.005	nc	<0.02	<0.02	nc	<0.02	<0.05	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.002	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.005	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.005	<0.005	nc	<0.005	nc	
PFAS - (n:2) Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.005	<0.001	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.005	<0.005	nc	<0.005	nc	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.005	<0.001	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.005	<0.005	nc	<0.005	nc	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.005	<0.002	nc	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.005	<0.005	nc	<0.005	nc	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.005	<0.002	nc	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.005	<0.005	nc	<0.005	nc	
PFAS - Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.002	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.002	<0.002	nc	<0.002	nc	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.005	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc	<0.005	nc	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.002	<0.002	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	nc	
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.005	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc	<0.005	nc	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.005	<0.1	nc	<0.05	<0.05	nc	<0.05	<0.1	nc	<0.005	<0.005	nc	<0.005	nc	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.002	<0.002	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	nc	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.005	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.005	<0.005	nc	<0.005	nc	

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2509682		378731-A		RPD	ES2509682		ES2509682		RPD	ES2509682		378731-A		RPD	ES2509682		ES2509682		RPD
				0908 MW255D 250403		0908 QC205 250403			0908 MW441 250404		0908 QC106 250404			0908 MW441 250404		0908 QC206 250404			0908 MW169D 250404		0908 QC107 250404		
				Water		Water			Water		Water			Water		Water			Water		Water		
				03 Apr 2025		03 Apr 2025			04 Apr 2025		04 Apr 2025			04 Apr 2025		04 Apr 2025			04 Apr 2025		04 Apr 2025		
	Unit	LOR	RPD																				
PFAS																							
Perfluorooctanoic acid (PFOA)	µg/L	0.001		<0.002	<0.001	nc	1.72	1.23	33	1.72	0.92	61	<0.01	<0.01	nc								
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		<0.002	<0.001	nc	107	74.1	36	107	69	43	0.09	0.09	0								
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		<0.002	<0.001	nc	19.7	11.2	55	19.7	11	57	0.14	0.14	0								
Sum of PFHxS and PFOS	µg/L	0.001		<0.002	<0.001	nc	127	85.3	39	127	80	45	0.23	0.23	0								
Sum of PFAS	µg/L	0.001		<0.002	<0.001	nc	136	92.2	38	136	85	46	0.23	0.25	8								
PFAS - Perfluoroalkyl Sulfonic Acids																							
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.01	-	nc	0.04	0.04	0	0.04	-	nc	<0.02	<0.02	nc								
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.002	<0.001	nc	0.29	0.18	47	0.29	0.16	58	<0.02	<0.02	nc								
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.002	<0.001	nc	0.82	0.55	39	0.82	0.47	54	<0.02	<0.02	nc								
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		<0.002	<0.001	nc	1.54	1.92	22	1.54	0.79	64	<0.02	<0.02	nc								
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		-	-	nc	0.12	0.16	29	0.12	-	nc	<0.02	<0.02	nc								
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.002	<0.002	nc	<0.04	<0.02	nc	<0.04	<0.02	nc	<0.02	<0.02	nc								
PFAS - Perfluoroalkyl Carboxylic Acids																							
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.005	-	nc	<0.10	<0.05	nc	<0.10	-	nc	<0.05	<0.05	nc								
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.01	<0.02	nc	0.3	0.1	100	0.3	0.1	100	<0.1	<0.1	nc								
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.002	<0.004	nc	0.62	0.34	58	0.62	0.31	67	<0.02	<0.02	nc								
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		<0.002	<0.001	nc	3.96	2.09	62	3.96	1.8	75	<0.02	0.02	nc								
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.002	<0.001	nc	0.42	0.26	47	0.42	0.25	51	<0.02	<0.02	nc								
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.002	<0.001	nc	<0.04	<0.02	nc	<0.04	0.01	nc	<0.02	<0.02	nc								
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.002	<0.002	nc	<0.04	<0.02	nc	<0.04	<0.02	nc	<0.02	<0.02	nc								
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.002	<0.002	nc	<0.04	<0.02	nc	<0.04	<0.02	nc	<0.02	<0.02	nc								
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.002	<0.005	nc	<0.04	<0.02	nc	<0.04	<0.05	nc	<0.02	<0.02	nc								
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.002	<0.01	nc	<0.04	<0.02	nc	<0.04	<0.1	nc	<0.02	<0.02	nc								
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.005	<0.05	nc	<0.10	<0.05	nc	<0.10	<0.5	nc	<0.05	<0.05	nc								
PFAS - (n:2) Fluorotelomer Sulfonic Acids																							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.005	<0.001	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.005	<0.001	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.005	<0.002	nc	<0.05	<0.05	nc	<0.05	0.02	nc	<0.05	<0.05	nc								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.005	<0.002	nc	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc								
PFAS - Perfluoroalkyl Sulfonamides																							
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.002	<0.1	nc	<0.04	<0.02	nc	<0.04	<0.1	nc	<0.02	<0.02	nc								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.005	<0.05	nc	<0.10	<0.05	nc	<0.10	<0.05	nc	<0.05	<0.05	nc								
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.002	<0.002	nc	<0.04	<0.02	nc	<0.04	<0.02	nc	<0.02	<0.02	nc								
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.005	<0.05	nc	<0.10	<0.05	nc	<0.10	<0.05	nc	<0.05	<0.05	nc								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.005	<0.1	nc	<0.10	<0.05	nc	<0.10	<0.1	nc	<0.05	<0.05	nc								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.002	<0.002	nc	<0.04	<0.02	nc	<0.04	<0.02	nc	<0.02	<0.02	nc								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.005	<0.5	nc	<0.10	<0.05	nc	<0.10	<0.5	nc	<0.05	<0.05	nc								

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2509682		378731-A		RPD	ES2510539		ES2510539		RPD	ES2510539		378731-A		RPD	ES2510539		ES2510539		RPD
				0908 MW169D 250404		0908 QC207 250404			0908 MW829 250407		0908 QC108 250407			0908 MW829 250407		0908 QC208 250407			0908 SW011 250407		0908 QC110 250407		
				Water		Water			Water		Water			Water		Water			Water		Water		
				04 Apr 2025		04 Apr 2025			07 Apr 2025		07 Apr 2025			07 Apr 2025		07 Apr 2025			07 Apr 2025		07 Apr 2025		
	Unit	LOR	RPD																				
PFAS																							
Perfluorooctanoic acid (PFOA)	µg/L	0.001		<0.01	<0.01	nc	<0.01	<0.01	nc	<0.01	<0.01	nc	0.03	0.03	0								
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		0.09	0.07	25	0.02	0.02	0	0.02	0.03	40	1.84	1.74	6								
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		0.14	0.14	0	0.01	0.02	67	0.01	0.02	67	0.42	0.43	2								
Sum of PFHxS and PFOS	µg/L	0.001		0.23	0.21	9	0.03	0.04	29	0.03	0.05	50	2.26	2.17	4								
Sum of PFAS	µg/L	0.001		0.23	0.26	12	0.03	0.04	29	0.03	0.05	50	2.46	2.35	5								
PFAS - Perfluoroalkyl Sulfonic Acids																							
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.02	-	nc	<0.02	<0.02	nc	<0.02	-	nc	<0.02	<0.02	nc								
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.02	0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	0.02	0.02	0								
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.02	0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	0.03	0.02	40								
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	0.04	0.04	0								
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		<0.02	-	nc	<0.02	<0.02	nc	<0.02	-	nc	<0.02	<0.02	nc								
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc								
PFAS - Perfluoroalkyl Carboxylic Acids																							
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.05	-	nc	<0.05	<0.05	nc	<0.05	-	nc	<0.05	<0.05	nc								
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.1	<0.02	nc	<0.1	<0.1	nc	<0.1	<0.02	nc	<0.1	<0.1	nc								
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc								
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		<0.02	0.02	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	0.08	0.07	13								
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.02	<0.02	nc								
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.02	<0.02	nc								
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc								
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc								
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.02	<0.05	nc	<0.02	<0.02	nc	<0.02	<0.05	nc	<0.02	<0.02	nc								
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc								
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc								
PFAS - (n:2) Fluorotelomer Sulfonic Acids																							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc								
PFAS - Perfluoroalkyl Sulfonamides																							
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc								
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc								
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.05	<0.1	nc	<0.05	<0.05	nc	<0.05	<0.1	nc	<0.05	<0.05	nc								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc								

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2510539		378731-A		RPD	ES2510539		ES2510539		RPD	ES2510539		ES2510539		RPD
				0908 SW011_250407		0908 QC210_250407			0908 MW163_250409		0908 QC111_250409			0908 MW2415_250409		0908 QC112_250409		
				Water		Water			Water		Water			Water		Water		
				07 Apr 2025		07 Apr 2025			09 Apr 2025		09 Apr 2025			09 Apr 2025		09 Apr 2025		
	Unit	LOR	RPD															
PFAS																		
Perfluorooctanoic acid (PFOA)	µg/L	0.001		0.03	0.04	29	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		1.84	2.0	8	<0.002	<0.002	nc	<0.002	0.001	nc	<0.002	<0.002	nc	0.002	nc	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		0.42	0.49	15	0.006	0.006	0	0.006	0.007	15	<0.002	<0.002	nc	<0.002	nc	
Sum of PFHxS and PFOS	µg/L	0.001		2.26	2.5	10	0.006	0.006	0	0.006	0.008	29	<0.002	<0.002	nc	0.002	nc	
Sum of PFAS	µg/L	0.001		2.46	2.7	9	0.006	0.006	0	0.006	0.011	59	<0.002	<0.002	nc	0.002	nc	
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.02	-	nc	<0.01	<0.01	nc	<0.01	-	nc	<0.01	<0.01	nc	<0.01	nc	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		0.02	0.02	0	<0.002	<0.002	nc	<0.002	0.003	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		0.03	0.03	0	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		0.04	0.04	0	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		<0.02	-	nc	-	-	nc	-	-	nc	-	-	nc	-	nc	
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	nc	
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.05	-	nc	<0.005	<0.005	nc	<0.005	-	nc	<0.005	<0.005	nc	<0.005	nc	
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.1	<0.02	nc	<0.01	<0.01	nc	<0.01	<0.02	nc	<0.01	<0.01	nc	<0.01	nc	
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.004	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		0.08	0.08	0	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.02	0.01	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.02	<0.05	nc	<0.002	<0.002	nc	<0.002	<0.005	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.02	<0.1	nc	<0.002	<0.002	nc	<0.002	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.05	<0.5	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	nc	
PFAS - (n:2) Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.005	<0.005	nc	<0.005	<0.001	nc	<0.005	<0.005	nc	<0.005	nc	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.005	<0.005	nc	<0.005	<0.001	nc	<0.005	<0.005	nc	<0.005	nc	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.005	<0.005	nc	<0.005	<0.002	nc	<0.005	<0.005	nc	<0.005	nc	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.005	<0.005	nc	<0.005	<0.002	nc	<0.005	<0.005	nc	<0.005	nc	
PFAS - Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.02	<0.1	nc	<0.002	<0.002	nc	<0.002	<0.01	nc	<0.002	<0.002	nc	<0.002	nc	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.05	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	nc	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	nc	
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.05	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	nc	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.05	<0.1	nc	<0.005	<0.005	nc	<0.005	<0.1	nc	<0.005	<0.005	nc	<0.005	nc	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	nc	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.05	<0.5	nc	<0.005	<0.005	nc	<0.005	<0.5	nc	<0.005	<0.005	nc	<0.005	nc	

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2510539		378731-A		RPD	ES2510539		ES2510539		RPD	ES2510539		378731-A		RPD	ES2510539		ES2510539		RPD
				0908 MW241S 250409		0908 QC212 250409			0908 MW264D 250410		0908 QC213 250410			0908 MW264D 250410		0908 QC213 250410			0908 MW132D 250410		0908 QC114 250410		
				Water		Water			Water		Water			Water		Water			Water		Water		
				09 Apr 2025		09 Apr 2025			10 Apr 2025		10 Apr 2025			10 Apr 2025		10 Apr 2025			10 Apr 2025		10 Apr 2025		
	Unit	LOR	RPD																				
PFAS																							
Perfluorooctanoic acid (PFOA)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	0.01	0.01	0								
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		<0.002	0.002	nc	0.008	0.005	46	0.008	0.008	0	0.89	0.78	13								
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	0.002	nc	0.24	0.22	9								
Sum of PFHxS and PFOS	µg/L	0.001		<0.002	0.002	nc	0.008	0.005	46	0.008	0.010	22	1.13	1.00	12								
Sum of PFAS	µg/L	0.001		<0.002	0.002	nc	0.008	0.005	46	0.008	0.010	22	1.22	1.07	13								
PFAS - Perfluoroalkyl Sulfonic Acids																							
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.01	-	nc	<0.01	<0.01	nc	<0.01	-	nc	<0.02	<0.02	nc								
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.02	<0.02	nc								
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.02	<0.02	nc								
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	0.05	0.04	22								
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		-	-	nc	-	-	nc	-	-	nc	<0.02	<0.02	nc								
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.02	<0.02	nc								
PFAS - Perfluoroalkyl Carboxylic Acids																							
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.005	-	nc	<0.005	<0.005	nc	<0.005	-	nc	<0.05	<0.05	nc								
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.01	<0.004	nc	<0.01	<0.01	nc	<0.01	<0.01	nc	<0.1	<0.1	nc								
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.02	<0.02	nc								
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	0.03	0.02	40								
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.02	<0.02	nc								
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.02	<0.02	nc								
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.02	<0.02	nc								
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.02	<0.02	nc								
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.002	<0.005	nc	<0.002	<0.002	nc	<0.002	<0.005	nc	<0.02	<0.02	nc								
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.002	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.01	nc	<0.02	<0.02	nc								
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.05	<0.05	nc								
PFAS - (n:2) Fluorotelomer Sulfonic Acids																							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.005	<0.001	nc	<0.005	<0.005	nc	<0.005	<0.001	nc	<0.05	<0.05	nc								
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.005	<0.001	nc	<0.005	<0.005	nc	<0.005	<0.001	nc	<0.05	<0.05	nc								
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.005	<0.002	nc	<0.005	<0.005	nc	<0.005	<0.002	nc	<0.05	<0.05	nc								
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.005	<0.002	nc	<0.005	<0.005	nc	<0.005	<0.002	nc	<0.05	<0.05	nc								
PFAS - Perfluoroalkyl Sulfonamides																							
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.002	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.01	nc	<0.02	<0.02	nc								
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.05	<0.05	nc								
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.02	<0.02	nc								
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.05	<0.05	nc								
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.005	<0.1	nc	<0.005	<0.005	nc	<0.005	<0.1	nc	<0.05	<0.05	nc								
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.02	<0.02	nc								
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.005	<0.5	nc	<0.005	<0.005	nc	<0.005	<0.5	nc	<0.05	<0.05	nc								

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2510539		378731-A		RPD	ES2510539		ES2510539		RPD	ES2510539		378731-A		RPD	ES2510539		ES2510539		RPD
				0908 MW132D 250410		0908 QC214 250410			0908 MW161D 250410		0908 QC115 250410			0908 MW161D 250410		0908 QC215 250410			0908 MW134D 250411		0908 QC116 250411		
				Water		Water			Water		Water			Water		Water			Water		Water		
				10 Apr 2025		10 Apr 2025			10 Apr 2025		10 Apr 2025			10 Apr 2025		10 Apr 2025			11 Apr 2025		11 Apr 2025		
	Unit	LOR	RPD																				
PFAS																							
Perfluorooctanoic acid (PFOA)	µg/L	0.001			0.01	0.02	67		0.01	0.01	0		0.01	0.02	67		<0.01		<0.01		nc		
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001			0.89	0.86	3		0.67	0.46	37		0.67	0.67	0		<0.01		<0.01		nc		
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001			0.24	0.25	4		0.21	0.18	15		0.21	0.25	17		<0.01		<0.01		nc		
Sum of PFHxS and PFOS	µg/L	0.001			1.13	1.1	3		0.88	0.64	32		0.88	0.92	4		<0.01		<0.01		nc		
Sum of PFAS	µg/L	0.001			1.22	1.2	2		0.93	0.68	31		0.93	1.0	7		<0.01		<0.01		nc		
PFAS - Perfluoroalkyl Sulfonic Acids																							
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01			<0.02	-	nc		<0.02	<0.02	nc		<0.02	-	nc		<0.02		<0.02		nc		
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001			<0.02	<0.01	nc		<0.02	<0.02	nc		<0.02	0.02	nc		<0.02		<0.02		nc		
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001			<0.02	0.01	nc		<0.02	<0.02	nc		<0.02	0.02	nc		<0.02		<0.02		nc		
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001			0.05	0.05	0		<0.02	<0.02	nc		<0.02	0.02	nc		<0.02		<0.02		nc		
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02			<0.02	-	nc		<0.02	<0.02	nc		<0.02	-	nc		<0.02		<0.02		nc		
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002			<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02		<0.02		nc		
PFAS - Perfluoroalkyl Carboxylic Acids																							
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005			<0.05	-	nc		<0.05	<0.05	nc		<0.05	-	nc		<0.05		<0.05		nc		
Perfluorobutanoic acid (PFBA)	µg/L	0.002			<0.1	<0.02	nc		<0.1	<0.1	nc		<0.1	<0.02	nc		<0.1		<0.1		nc		
Perfluoropentanoic acid (PFPeA)	µg/L	0.002			<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02		<0.02		nc		
Perfluorohexanoic acid (PFHxA)	µg/L	0.001			0.03	0.03	0		0.04	0.03	29		0.04	0.04	0		<0.02		<0.02		nc		
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001			<0.02	<0.01	nc		<0.02	<0.02	nc		<0.02	<0.01	nc		<0.02		<0.02		nc		
Perfluorononanoic acid (PFNA)	µg/L	0.001			<0.02	<0.01	nc		<0.02	<0.02	nc		<0.02	<0.01	nc		<0.02		<0.02		nc		
Perfluorodecanoic acid (PFDA)	µg/L	0.002			<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02		<0.02		nc		
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002			<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02		<0.02		nc		
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002			<0.02	<0.05	nc		<0.02	<0.02	nc		<0.02	<0.05	nc		<0.02		<0.02		nc		
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002			<0.02	<0.1	nc		<0.02	<0.02	nc		<0.02	<0.1	nc		<0.02		<0.02		nc		
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005			<0.05	<0.5	nc		<0.05	<0.05	nc		<0.05	<0.5	nc		<0.05		<0.05		nc		
PFAS - (n:2) Fluorotelomer Sulfonic Acids																							
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001			<0.05	<0.01	nc		<0.05	<0.05	nc		<0.05	<0.01	nc		<0.05		<0.05		nc		
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001			<0.05	<0.01	nc		<0.05	<0.05	nc		<0.05	<0.01	nc		<0.05		<0.05		nc		
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002			<0.05	<0.02	nc		<0.05	<0.05	nc		<0.05	<0.02	nc		<0.05		<0.05		nc		
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002			<0.05	<0.02	nc		<0.05	<0.05	nc		<0.05	<0.02	nc		<0.05		<0.05		nc		
PFAS - Perfluoroalkyl Sulfonamides																							
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002			<0.02	<0.1	nc		<0.02	<0.02	nc		<0.02	<0.1	nc		<0.02		<0.02		nc		
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005			<0.05	<0.05	nc		<0.05	<0.05	nc		<0.05	<0.05	nc		<0.05		<0.05		nc		
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002			<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02		<0.02		nc		
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005			<0.05	<0.05	nc		<0.05	<0.05	nc		<0.05	<0.05	nc		<0.05		<0.05		nc		
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005			<0.05	<0.1	nc		<0.05	<0.05	nc		<0.05	<0.1	nc		<0.05		<0.05		nc		
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002			<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02	<0.02	nc		<0.02		<0.02		nc		
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005			<0.05	<0.5	nc		<0.05	<0.05	nc		<0.05	<0.5	nc		<0.05		<0.05		nc		

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2510539		378731-A		RPD	ES2511299		ES2511299		RPD	ES2511299		ES2511299		RPD
				0908 MW134D 250411		0908 QC216 250411			0908 MW240D 250416		0908 QC117 250416			0908 MW344D 250416		0908 QC118 250416		
				Water		Water			Water		Water			Water		Water		
				11 Apr 2025		11 Apr 2025			16 Apr 2025		16 Apr 2025			16 Apr 2025		16 Apr 2025		
	Unit	LOR	RPD															
PFAS																		
Perfluorooctanoic acid (PFOA)	µg/L	0.001		<0.01	<0.01	nc	<0.01	<0.01	nc	<0.01	<0.01	nc	0.05	0.06	18			
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		<0.01	<0.01	nc	0.01	0.01	0	0.01	<0.01	nc	0.07	0.05	33			
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		<0.01	0.01	nc	0.15	0.15	0	0.15	0.13	14	0.83	0.98	17			
Sum of PFHxS and PFOS	µg/L	0.001		<0.01	0.01	nc	0.16	0.16	0	0.16	0.13	21	0.90	1.03	13			
Sum of PFAS	µg/L	0.001		<0.01	0.01	nc	0.25	0.24	4	0.25	0.21	17	1.11	1.25	12			
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.02	-	nc	<0.02	<0.02	nc	<0.02	-	nc	<0.02	<0.02	nc			
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		<0.02	<0.01	nc	0.02	0.02	0	0.02	0.02	0	0.04	0.03	29			
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		<0.02	<0.01	nc	0.02	0.02	0	0.02	0.02	0	0.04	0.04	0			
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	0.03	0.03	0			
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		<0.02	-	nc	<0.02	<0.02	nc	<0.02	-	nc	<0.02	<0.02	nc			
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc			
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.05	-	nc	<0.05	<0.05	nc	<0.05	-	nc	<0.05	<0.05	nc			
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.1	<0.02	nc	<0.1	<0.1	nc	<0.1	<0.02	nc	<0.1	<0.1	nc			
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc			
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		<0.02	<0.01	nc	0.05	0.04	22	0.05	0.03	50	0.05	0.06	18			
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.02	<0.02	nc			
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.02	<0.02	nc			
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc			
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc			
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.02	<0.05	nc	<0.02	<0.02	nc	<0.02	<0.05	nc	<0.02	<0.02	nc			
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc			
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc			
PFAS - (n:2) Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc			
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc			
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc			
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc			
PFAS - Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc			
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc			
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc			
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc			
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.05	<0.1	nc	<0.05	<0.05	nc	<0.05	<0.1	nc	<0.05	<0.05	nc			
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc			
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc			

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number Field ID Matrix Type Date				ES2511299		378731-A		RPD	ES2515837		381865		RPD
				0908_MW344D_250416		0908_QC218_250416			0908_POT303_250527		0908_QC219_250527		
				Water		Water			Water		Water		
				16 Apr 2025		16 Apr 2025			27 May 2025		27 May 2025		
	Unit	LOR	RPD										
PFAS													
Perfluorooctanoic acid (PFOA)	µg/L	0.001		0.05	0.05	0	<0.002	<0.001	nc				
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001		0.07	0.04	55	<0.002	<0.001	nc				
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001		0.83	0.89	7	<0.002	<0.001	nc				
Sum of PFHxS and PFOS	µg/L	0.001		0.90	0.93	3	<0.002	<0.001	nc				
Sum of PFAS	µg/L	0.001		1.11	1.2	8	<0.002	<0.001	nc				
PFAS - Perfluoroalkyl Sulfonic Acids													
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01		<0.02	-	nc	<0.01	-	nc				
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001		0.04	0.03	29	<0.002	<0.001	nc				
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001		0.04	0.04	0	<0.002	<0.001	nc				
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001		0.03	0.03	0	<0.002	<0.001	nc				
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02		<0.02	-	nc	-	-	nc				
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc				
PFAS - Perfluoroalkyl Carboxylic Acids													
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005		<0.05	-	nc	<0.005	-	nc				
Perfluorobutanoic acid (PFBA)	µg/L	0.002		<0.1	<0.02	nc	<0.01	<0.002	nc				
Perfluoropentanoic acid (PFPeA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc				
Perfluorohexanoic acid (PFHxA)	µg/L	0.001		0.05	0.05	0	<0.002	<0.001	nc				
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001		<0.02	0.01	nc	<0.002	<0.001	nc				
Perfluorononanoic acid (PFNA)	µg/L	0.001		<0.02	<0.01	nc	<0.002	<0.001	nc				
Perfluorodecanoic acid (PFDA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc				
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc				
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002		<0.02	<0.05	nc	<0.002	<0.005	nc				
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002		<0.02	<0.1	nc	<0.002	<0.01	nc				
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005		<0.05	<0.5	nc	<0.005	<0.05	nc				
PFAS - (n:2) Fluorotelomer Sulfonic Acids													
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.005	<0.001	nc				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001		<0.05	<0.01	nc	<0.005	<0.001	nc				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.005	<0.002	nc				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002		<0.05	<0.02	nc	<0.005	<0.002	nc				
PFAS - Perfluoroalkyl Sulfonamides													
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002		<0.02	<0.1	nc	<0.002	<0.01	nc				
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005		<0.05	<0.05	nc	<0.005	<0.05	nc				
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc				
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005		<0.05	<0.05	nc	<0.005	<0.05	nc				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005		<0.05	<0.1	nc	<0.005	<0.1	nc				
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002		<0.02	<0.02	nc	<0.002	<0.002	nc				
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005		<0.05	<0.5	nc	<0.005	<0.5	nc				

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D3 - Rinsate Blank Results

Lab Report Number			ES2509682	ES2509682	ES2509682	ES2509682	ES2510539	ES2510539	ES2510539	ES2510539	ES2511299	ES2511299
Field ID			0908_QC300_250401	0908_QC301_250402	0908_QC302_250403	0908_QC303_250404	0908_QC304_250407	0908_QC305_250409	0908_QC306_250410	0908_QC307_250411	0908_QC307_250414	0908_QC308_250415
Matrix Type			Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Date			01 Apr 2025	02 Apr 2025	03 Apr 2025	04 Apr 2025	07 Apr 2025	09 Apr 2025	10 Apr 2025	11 Apr 2025	14 Apr 2025	15 Apr 2025
	Unit	LOR										
PFAS												
Perfluorooctanoic acid (PFOA)	µg/L	0.002	<0.01	<0.01	<0.002	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.002	<0.01	<0.01	<0.002	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002	<0.01	<0.01	<0.002	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002
Sum of PFHxS and PFOS	µg/L	0.002	<0.01	<0.01	<0.002	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002
Sum of PFAS	µg/L	0.002	<0.01	<0.01	<0.002	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002
PFAS - Perfluoroalkyl Sulfonic Acids												
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.02	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	<0.02	<0.02	-	<0.02	<0.02	-	-	-	-	-
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
PFAS - Perfluoroalkyl Carboxylic Acids												
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorobutanoic acid (PFBA)	µg/L	0.01	<0.1	<0.1	<0.01	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
PFAS - (n:2) Fluorotelomer Sulfonic Acids												
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
PFAS - Perfluoroalkyl Sulfonamides												
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	<0.002	<0.02	<0.02	<0.002	<0.002	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005

Notes
LOR = Limit of Reporting

Lab Report Number			ES2511299	ES2511299	ES2515731
Field ID			0908_QC309_250416	0908_QC310_250417	0908_QC300_250527
Matrix Type			Water	Water	Water
Date			16 Apr 2025	17 Apr 2025	27 May 2025
	Unit	LOR			
PFAS					
Perfluorooctanoic acid (PFOA)	µg/L	0.002	<0.01	<0.01	<0.002
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.002	<0.01	<0.01	<0.002
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002	<0.01	<0.01	<0.002
Sum of PFHxS and PFOS	µg/L	0.002	<0.01	<0.01	<0.002
Sum of PFAS	µg/L	0.002	<0.01	<0.01	<0.002
PFAS - Perfluoroalkyl Sulfonic Acids					
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.02	<0.01
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	<0.02	<0.02	-
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	<0.002
PFAS - Perfluoroalkyl Carboxylic Acids					
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.05	<0.05	<0.005
Perfluorobutanoic acid (PFBA)	µg/L	0.01	<0.1	<0.1	<0.01
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluorohexanoic acid (PFHxA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluorononanoic acid (PFNA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.02	<0.002
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	<0.005
PFAS - (n:2) Fluorotelomer Sulfonic Acids					
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005	<0.05	<0.05	<0.005
PFAS - Perfluoroalkyl Sulfonamides					
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	<0.002
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	<0.005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	<0.002
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	<0.005

Notes
LOR = Limit of Reporting

Appendix E

Laboratory Certificates



CERTIFICATE OF ANALYSIS

Work Order : **ES2509680**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80511**
Sampler : **[REDACTED]**
Site : **WLM Soil**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **19**
No. of samples analysed : **19**

Page : 1 of 18
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **04-Apr-2025 17:00**
Date Analysis Commenced : **08-Apr-2025**
Issue Date : **14-Apr-2025 12:33**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0908_SD059_250402	0908_SD047_250402	0908_SD055_250402	0908_SD108_250402	0908_SD110_250402
Sampling date / time				02-Apr-2025 09:55	02-Apr-2025 12:47	02-Apr-2025 13:40	02-Apr-2025 13:15	02-Apr-2025 13:28
Compound	CAS Number	LOR	Unit	ES2509680-001	ES2509680-002	ES2509680-003	ES2509680-004	ES2509680-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	-----	0.1	%	18.5	22.0	33.5	68.0	21.1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0045
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0003	0.0021
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0067	0.0028	0.0112	0.0365
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.0007	0.0003	0.0010	0.0010
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0003	0.0835	0.0109	0.224	0.103
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0010	0.0004	0.0031	0.0012
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0004	0.0023	0.0049	0.0018
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	0.003
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0010	0.0036
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.0003	<0.0002	0.0016	0.0044
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0005	0.0008
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.0008	<0.0002	0.0005	0.0014
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0006	0.0002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0003	<0.0002

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD059_250402	0908_SD047_250402	0908_SD055_250402	0908_SD108_250402	0908_SD110_250402
Sampling date / time				02-Apr-2025 09:55	02-Apr-2025 12:47	02-Apr-2025 13:40	02-Apr-2025 13:15	02-Apr-2025 13:28	
Compound	CAS Number	LOR	Unit	ES2509680-001	ES2509680-002	ES2509680-003	ES2509680-004	ES2509680-005	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.0006	0.0005	0.0164	0.0040	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0003	0.0940	0.0172	0.266	0.168	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0003	0.0902	0.0137	0.235	0.140	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0003	0.0913	0.0137	0.240	0.157	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD059_250402	0908_SD047_250402	0908_SD055_250402	0908_SD108_250402	0908_SD110_250402
Sampling date / time					02-Apr-2025 09:55	02-Apr-2025 12:47	02-Apr-2025 13:40	02-Apr-2025 13:15	02-Apr-2025 13:28
Compound	CAS Number	LOR	Unit		ES2509680-001	ES2509680-002	ES2509680-003	ES2509680-004	ES2509680-005
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.0002	%		93.8	95.0	98.0	99.1	89.4
13C8-PFOA	-----	0.0002	%		99.0	102	102	101	103



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0908_SD079_250402	0908_SD048_250402	0908_SD001_250402	0908_SD006_250402	0908_SD007_250402
Sampling date / time				02-Apr-2025 15:42	02-Apr-2025 14:02	02-Apr-2025 10:19	02-Apr-2025 10:45	02-Apr-2025 10:31
Compound	CAS Number	LOR	Unit	ES2509680-006	ES2509680-007	ES2509680-008	ES2509680-009	ES2509680-010
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	-----	0.1	%	27.5	26.2	62.5	75.7	21.0
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0010	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0032	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0014	0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0005	0.0010	0.0237	0.0173	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0021	0.0024	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0061	0.0031	0.130	0.735	0.0030
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0012	0.0106	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0004	0.0052	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0004	0.0020	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0031	0.0025	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0011	0.0006	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0008	0.0013	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0003	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0006	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0002	0.0006	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0008	0.0035	<0.0002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0004	0.0005	<0.0002

Sub-Matrix: SEDIMENT
(Matrix: SOIL)

0908 SD079 250402

0908 SD048 250402

0908 SD001 250402

0908 SD006 250402

0908 SD007 250402

Sampling date / time

02-Apr-2025 15:42

02-Apr-2025 14:02

02-Apr-2025 10:19

02-Apr-2025 10:45

02-Apr-2025 10:31

Compound

CAS Number

LOR

Unit

ES2509680-006

ES2509680-007

ES2509680-008

ES2509680-009

ES2509680-010

Result

Result

Result

Results

Result

Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	0.0012	<0.0005
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Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0010	0.0010	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Sum of PFAS	----	0.0002	mg/kg	0.0066	0.0041	0.171	0.785	0.0030
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0066	0.0041	0.154	0.752	0.0030
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0066	0.0041	0.162	0.759	0.0030

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD079_250402	0908_SD048_250402	0908_SD001_250402	0908_SD006_250402	0908_SD007_250402
Sampling date / time					02-Apr-2025 15:42	02-Apr-2025 14:02	02-Apr-2025 10:19	02-Apr-2025 10:45	02-Apr-2025 10:31
Compound	CAS Number	LOR	Unit		ES2509680-006	ES2509680-007	ES2509680-008	ES2509680-009	ES2509680-010
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.0002	%		99.4	104	108	112	107
13C8-PFOA	-----	0.0002	%		103	104	107	106	104



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0908_SD009_250402	0908_SD060_250402	0908_SD062_250402	0908_SD081_250402	0908_SD005_250402
Sampling date / time				02-Apr-2025 11:00	02-Apr-2025 09:38	02-Apr-2025 09:10	02-Apr-2025 08:55	02-Apr-2025 11:30
Compound	CAS Number	LOR	Unit	ES2509680-011	ES2509680-012	ES2509680-013	ES2509680-014	ES2509680-015
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	-----	0.1	%	46.2	34.9	17.4	73.9	26.0
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0079	0.0005	0.0002	0.0017	0.0005
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0006	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0730	0.0142	0.0010	0.0118	0.0130
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0015	0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0034	<0.0002	<0.0002	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0010	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0003	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0004	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0009	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	0.0003	<0.0002	<0.0002	<0.0002	<0.0002

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD009_250402	0908_SD060_250402	0908_SD062_250402	0908_SD081_250402	0908_SD005_250402
Sampling date / time				02-Apr-2025 11:00	02-Apr-2025 09:38	02-Apr-2025 09:10	02-Apr-2025 08:55	02-Apr-2025 11:30	
Compound	CAS Number	LOR	Unit	ES2509680-011	ES2509680-012	ES2509680-013	ES2509680-014	ES2509680-015	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0905	0.0149	0.0012	0.0135	0.0135	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0809	0.0147	0.0012	0.0135	0.0135	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0827	0.0147	0.0012	0.0135	0.0135	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD009_250402	0908_SD060_250402	0908_SD062_250402	0908_SD081_250402	0908_SD005_250402
Sampling date / time					02-Apr-2025 11:00	02-Apr-2025 09:38	02-Apr-2025 09:10	02-Apr-2025 08:55	02-Apr-2025 11:30
Compound	CAS Number	LOR	Unit		ES2509680-011	ES2509680-012	ES2509680-013	ES2509680-014	ES2509680-015
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.0002	%		99.4	97.6	101	103	104
13C8-PFOA	-----	0.0002	%		109	106	105	107	106



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0908_SD014_250402	0908_SD023_250402	0908_SD024_250402	----	----
Sampling date / time				02-Apr-2025 11:11	02-Apr-2025 14:36	02-Apr-2025 14:56	----	----
Compound	CAS Number	LOR	Unit	ES2509680-016	ES2509680-017	ES2509680-018	-----	-----
				Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	52.2	45.6	43.6	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0069	0.0014	<0.0002	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0006	<0.0002	<0.0002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0717	0.0096	0.0066	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0008	<0.0002	<0.0002	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0003	<0.0002	<0.0002	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0006	<0.0002	<0.0002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0013	0.0002	<0.0002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	<0.0002	<0.0002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	<0.0002	<0.0002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD014_250402	0908_SD023_250402	0908_SD024_250402	----	----
Sampling date / time					02-Apr-2025 11:11	02-Apr-2025 14:36	02-Apr-2025 14:56	----	----
Compound	CAS Number	LOR	Unit	ES2509680-016	ES2509680-017	ES2509680-018	-----	-----	
				Result	Result	Result	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0003	<0.0002	<0.0002	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0833	0.0112	0.0066	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0786	0.0110	0.0066	----	----	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0813	0.0112	0.0066	----	----	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD014_250402	0908_SD023_250402	0908_SD024_250402	----	----
Sampling date / time					02-Apr-2025 11:11	02-Apr-2025 14:36	02-Apr-2025 14:56	----	----
Compound	CAS Number	LOR	Unit		ES2509680-016	ES2509680-017	ES2509680-018	-----	-----
					Result	Result	Result	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%		97.1	108	103	----	----
13C8-PFOA	----	0.0002	%		111	104	105	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	0908_QC101_250402	----	----	----	----
Sampling date / time				02-Apr-2025 08:55	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2509680-019	-----	-----	-----	-----
Result				----	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	71.6	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0010	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0092	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_QC101_250402				
Sampling date / time					02-Apr-2025 08:55				
Compound	CAS Number	LOR	Unit		ES2509680-019				
				Result					
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005				
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002				
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005				
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005				
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005				
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002				
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002				
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005				
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		0.0102				
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0102				
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0102				
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_QC101_250402	----	----	----	----
				Sampling date / time	02-Apr-2025 08:55	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2509680-019	-----	-----	-----	-----	
				Result	----	----	----	----	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%	109	----	----	----	----	
13C8-PFOA	----	0.0002	%	110	----	----	----	----	



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2509680**

Page : 1 of 7

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.1

C-O-C number : 80511

Sampler : [REDACTED]

Site : WLM Soil

Quote number : ES24AECOMAU0012 V3

No. of samples received : 19

No. of samples analysed : 19

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : +61 2 8784 8555

Date Samples Received : 04-Apr-2025

Date Analysis Commenced : 08-Apr-2025

Issue Date : 14-Apr-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6498026)									
ES2509628-001	Anonymous	EA055: Moisture Content	----	0.1	%	7.3	7.5	2.4	0% - 20%
ES2509628-009	Anonymous	EA055: Moisture Content	----	0.1	%	8.2	8.7	5.2	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6498027)									
ES2509680-010	0908_SD007_250402	EA055: Moisture Content	----	0.1	%	21.0	22.0	4.7	0% - 20%
ES2509680-018	0908_SD024_250402	EA055: Moisture Content	----	0.1	%	43.6	37.5	15.1	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6492205)									
ES2509680-001	0908_SD059_250402	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2509680-011	0908_SD009_250402	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	0.0002	0.0003	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0079	0.0078	0.0	0% - 20%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0006	0.0008	25.1	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0730	0.0855	15.9	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0015	0.0015	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0034	0.0037	10.6	0% - 50%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6492205)									
ES2509680-001	0908_SD059_250402	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2509680-011	0908_SD009_250402	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	0.0003	0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0010	0.0009	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0003	0.0004	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0004	0.0004	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0009	0.0010	13.7	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6492205)									
ES2509680-001	0908_SD059_250402	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2509680-011	0908_SD009_250402	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0005	0.0006	25.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6492205) - continued									
ES2509680-011	0908_SD009_250402	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6492205)									
ES2509680-001	0908_SD059_250402	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2509680-011	0908_SD009_250402	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6492205)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	85.3	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	81.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.2	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.0	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.6	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.5	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.3	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6492205)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	88.9	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.5	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.3	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	89.3	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.8	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.2	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	83.0	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.1	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	78.1	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	88.0	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6492205)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	107	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	99.4	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	87.7	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	97.0	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.5	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.0	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6492205)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	96.4	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	113	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	83.0	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	85.7	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6492205)							
ES2509680-001	0908_SD059_250402	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	95.6	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	89.6	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	86.4	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	102	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	87.2	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	85.9	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	91.9	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	93.4	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6492205)							
ES2509680-001	0908_SD059_250402	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	91.9	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	95.7	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	109	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	99.3	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	86.2	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	89.7	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	84.7	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	84.8	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	82.8	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	76.3	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	85.9	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6492205)							
ES2509680-001	0908_SD059_250402	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	97.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	110	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	98.8	69.8	131



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6492205) - continued							
ES2509680-001	0908_SD059_250402	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	99.6	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	89.3	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	94.9	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	89.6	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6492205)							
ES2509680-001	0908_SD059_250402	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	98.1	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	104	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	77.7	69.2	143



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2509680	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 04-Apr-2025
Site	: WLM Soil	Issue Date	: 14-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 19
Order number	: 60739111_1.10.1	No. of samples analysed	: 19

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055)		02-Apr-2025	----	----	----	09-Apr-2025	16-Apr-2025	✓
0908_SD059_250402,								
0908_SD055_250402,								
0908_SD110_250402,								
0908_SD048_250402,								
0908_SD006_250402,								
0908_SD009_250402,								
0908_SD062_250402,								
0908_SD005_250402,								
0908_SD023_250402,								
0908_QC101_250402								
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X)		02-Apr-2025	08-Apr-2025	29-Sep-2025	✓	11-Apr-2025	18-May-2025	✓
0908_SD059_250402,								
0908_SD055_250402,								
0908_SD110_250402,								
0908_SD048_250402,								
0908_SD006_250402,								
0908_SD009_250402,								
0908_SD062_250402,								
0908_SD005_250402,								
0908_SD023_250402,								
0908_QC101_250402								

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0908_SD059_250402, 0908_SD055_250402, 0908_SD110_250402, 0908_SD048_250402, 0908_SD006_250402, 0908_SD009_250402, 0908_SD062_250402, 0908_SD005_250402, 0908_SD023_250402, 0908_QC101_250402	0908_SD047_250402, 0908_SD108_250402, 0908_SD079_250402, 0908_SD001_250402, 0908_SD007_250402, 0908_SD060_250402, 0908_SD081_250402, 0908_SD014_250402, 0908_SD024_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✓	11-Apr-2025	18-May-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0908_SD059_250402, 0908_SD055_250402, 0908_SD110_250402, 0908_SD048_250402, 0908_SD006_250402, 0908_SD009_250402, 0908_SD062_250402, 0908_SD005_250402, 0908_SD023_250402, 0908_QC101_250402	0908_SD047_250402, 0908_SD108_250402, 0908_SD079_250402, 0908_SD001_250402, 0908_SD007_250402, 0908_SD060_250402, 0908_SD081_250402, 0908_SD014_250402, 0908_SD024_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✓	11-Apr-2025	18-May-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SD059_250402, 0908_SD055_250402, 0908_SD110_250402, 0908_SD048_250402, 0908_SD006_250402, 0908_SD009_250402, 0908_SD062_250402, 0908_SD005_250402, 0908_SD023_250402, 0908_QC101_250402	0908_SD047_250402, 0908_SD108_250402, 0908_SD079_250402, 0908_SD001_250402, 0908_SD007_250402, 0908_SD060_250402, 0908_SD081_250402, 0908_SD014_250402, 0908_SD024_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✓	11-Apr-2025	18-May-2025	✓

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X)	02-Apr-2025	08-Apr-2025	29-Sep-2025	✓	11-Apr-2025	18-May-2025	✓	
0908_SD059_250402,								0908_SD047_250402,
0908_SD055_250402,								0908_SD108_250402,
0908_SD110_250402,								0908_SD079_250402,
0908_SD048_250402,								0908_SD001_250402,
0908_SD006_250402,								0908_SD007_250402,
0908_SD009_250402,								0908_SD060_250402,
0908_SD062_250402,								0908_SD081_250402,
0908_SD005_250402,								0908_SD014_250402,
0908_SD023_250402,								0908_SD024_250402,
0908_QC101_250402								



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2509680

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.1

C-O-C number : 80511
Site : WLM Soil
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(ES24AECOMAU0012 V3)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 04-Apr-2025 17:00
Client Requested Due : 14-Apr-2025
Date

Issue Date : 08-Apr-2025
Scheduled Reporting Date : 14-Apr-2025

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : ----
Receipt Detail :

Security Seal : Intact.
Temperature : 2.2°C - Ice present
No. of samples received / analysed : 19 / 19

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2509680-001	02-Apr-2025 09:55	0908_SD059_250402	✓	✓
ES2509680-002	02-Apr-2025 12:47	0908_SD047_250402	✓	✓
ES2509680-003	02-Apr-2025 13:40	0908_SD055_250402	✓	✓
ES2509680-004	02-Apr-2025 13:15	0908_SD108_250402	✓	✓
ES2509680-005	02-Apr-2025 13:28	0908_SD110_250402	✓	✓
ES2509680-006	02-Apr-2025 15:42	0908_SD079_250402	✓	✓
ES2509680-007	02-Apr-2025 14:02	0908_SD048_250402	✓	✓
ES2509680-008	02-Apr-2025 10:19	0908_SD001_250402	✓	✓
ES2509680-009	02-Apr-2025 10:45	0908_SD006_250402	✓	✓
ES2509680-010	02-Apr-2025 10:31	0908_SD007_250402	✓	✓
ES2509680-011	02-Apr-2025 11:00	0908_SD009_250402	✓	✓
ES2509680-012	02-Apr-2025 09:38	0908_SD060_250402	✓	✓
ES2509680-013	02-Apr-2025 09:10	0908_SD062_250402	✓	✓
ES2509680-014	02-Apr-2025 08:55	0908_SD081_250402	✓	✓
ES2509680-015	02-Apr-2025 11:30	0908_SD005_250402	✓	✓
ES2509680-016	02-Apr-2025 11:11	0908_SD014_250402	✓	✓
ES2509680-017	02-Apr-2025 14:36	0908_SD023_250402	✓	✓
ES2509680-018	02-Apr-2025 14:56	0908_SD024_250402	✓	✓
ES2509680-019	02-Apr-2025 08:55	0908_QC101_250402	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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Environmental Division
Sydney
Work Order Reference
ES2509680



Telephone : + 61-2-8784 8555

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM

Project Manager:
Phone:

ALS Compass COC Reference: 80511 # Samples: 19

Sampler:
Phone:

Turnaround Requirements: Standard Urgent

Special Instructions:

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 2.2 °C

Custody:

Relinquished by:

Received by:

Date / Time: 04/04/2025
08:30

Date / Time:

15:19 4/4

Relinquished by:

Date / Time: 04/04/25
17:00

Received by:

Date / Time:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

 CHAIN OF CUSTODY COC#: 80511 ALS Laboratory: ES Sydney Environmental	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
	DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME: 040925 1700
CLIENT: AECOMAU - AECOM Australia Pty Ltd	TURNAROUND REQUIREMENTS: 5 Days		LABORATORY USE ONLY (Circle)	
PROJECT: NSW_0908_PFASOMP_25	Biohazard info:		Custody Seal intact? Yes No N/A	
SITE: WLM Soil			Free ice / frozen ice bricks present upon receipt? Yes No N/A	
ORDER NO: 60739111_1.12			Random Sample Temperature on Receipt: °C	
PROJECT MANAGER: [REDACTED]	CONTACT PH:	SAMPLER MOBILE:	Other comments:	
PRIMARY SAMPLER: [REDACTED]	QUOTE NO: ES24AECOMAU0012 V3	/ ES2024AECOMAU0012		
EMAIL REPORTS TO: [REDACTED]				

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SD059_250402		02/04/2025 09:55 AM	SOIL	ALS 1 Non ALS 0	No	X		
002	0908_SD047_250402		02/04/2025 12:47 PM	SOIL	ALS 1 Non ALS 0	No	X		
003	0908_SD055_250402		02/04/2025 01:40 PM	SOIL	ALS 1 Non ALS 0	No	X		
004	0908_SD108_250402		02/04/2025 01:15 PM	SOIL	ALS 1 Non ALS 0	No	X		
005	0908_SD110_250402		02/04/2025 01:28 PM	SOIL	ALS 1 Non ALS 0	No	X		
006	0908_SD079_250402		02/04/2025 03:42 PM	SOIL	ALS 1 Non ALS 0	No	X		
007	0908_SD048_250402		02/04/2025 02:02 PM	SOIL	ALS 1 Non ALS 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2509680



Telephone : - 61-2-8784 8555



CHAIN OF CUSTODY

COC#: 80511

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: WLM Soil

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

Other comments:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001
2

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil SOIL	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	0908_SD001_250402		02/04/2025 10:19 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
009	0908_SD006_250402		02/04/2025 10:45 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
010	0908_SD007_250402		02/04/2025 10:31 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
011	0908_SD009_250402		02/04/2025 11:00 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
012	0908_SD060_250402		02/04/2025 09:38 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
013	0908_SD062_250402		02/04/2025 09:10 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
014	0908_SD081_250402		02/04/2025 08:55 AM	SOIL	ALS: 1 Non ALS: 0	No	X		

ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

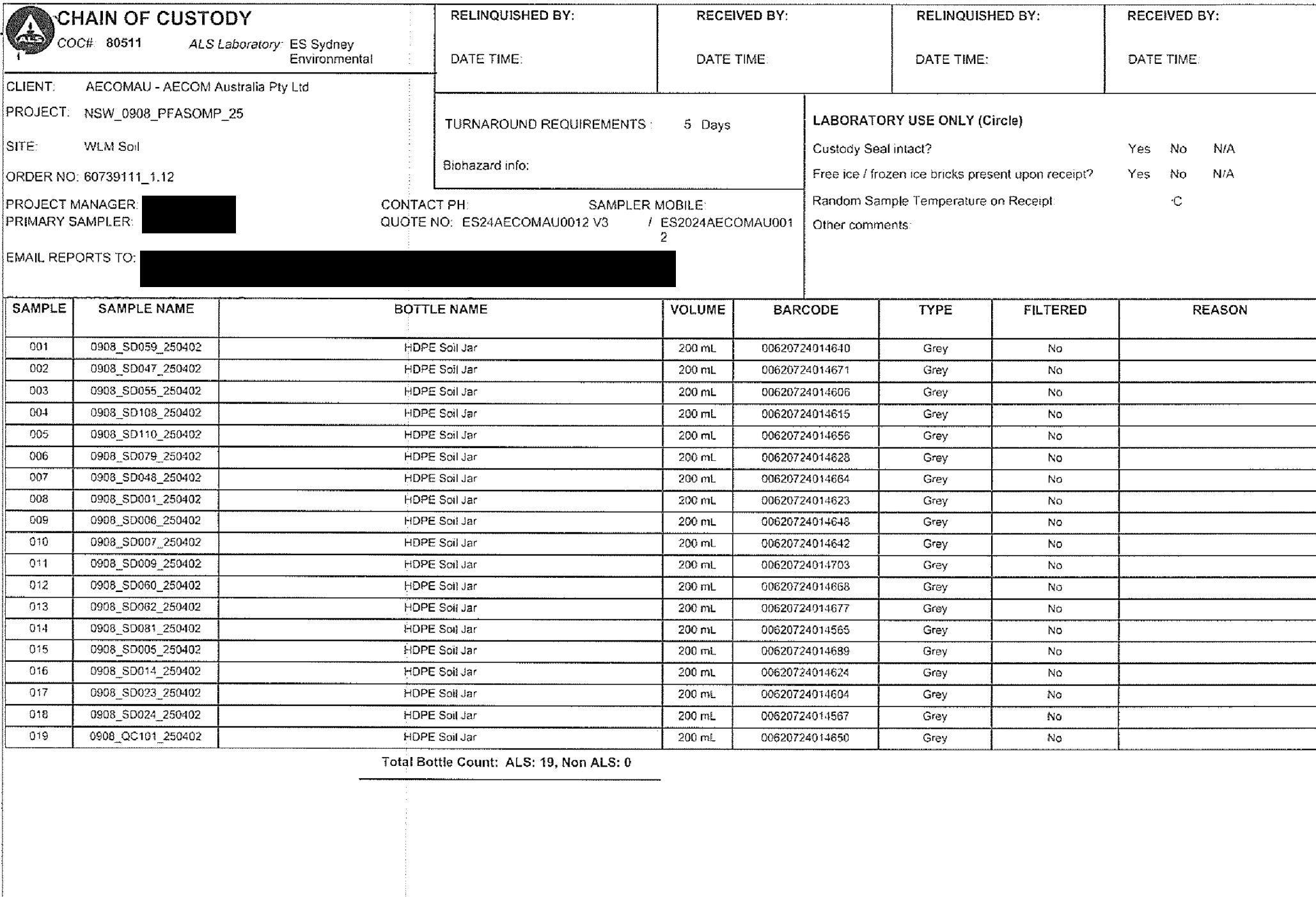
DATE TIME:

EMAIL REPORTS TO:

Biohazard info:

Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	0908_SD005_250402		02/04/2025 11:30 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
016	0908_SD014_250402		02/04/2025 11:11 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
017	0908_SD023_250402		02/04/2025 02:36 PM	SOIL	ALS: 1 Non ALS: 0	No	X		
018	0908_SD024_250402		02/04/2025 02:56 PM	SOIL	ALS: 1 Non ALS: 0	No	X		
019	0908_QC101_250402		02/04/2025 08:55 AM	SOIL	ALS: 1 Non ALS: 0	No	X		





CERTIFICATE OF ANALYSIS

Work Order : **ES2509681**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80514**
Sampler : **[REDACTED]**
Site : **Offsite 1**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **04-Apr-2025 17:00**
Date Analysis Commenced : **08-Apr-2025**
Issue Date : **14-Apr-2025 17:15**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

Organic Chemist

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT144_25040
3

Sampling date / time

03-Apr-2025 15:12

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2509681-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT144_25040
3

Sampling date / time

03-Apr-2025 15:12

Compound CAS Number LOR Unit

ES2509681-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	85.3	----	----	----	----
13C8-PFOA	----	0.002	%	94.0	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2509681	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 04-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 08-Apr-2025
C-O-C number	: 80514	Issue Date	: 14-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 1		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6493548)									
ES2509681-001	0908_POT144_250403	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493548)									
ES2509681-001	0908_POT144_250403	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493548) - continued									
ES2509681-001	0908_POT144_250403	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6493548)									
ES2509681-001	0908_POT144_250403	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6493548)									
ES2509681-001	0908_POT144_250403	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493548)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	102	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	81.6	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	96.0	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	96.2	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	95.9	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	84.8	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	58.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493548)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	80.9	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	90.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	81.7	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	96.7	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	87.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	90.2	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	93.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	84.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	92.5	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	65.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	100	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	87.3	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493548)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	88.6	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	111	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	139	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	89.4	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	90.7	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	77.3	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493548) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	96.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493548)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	87.4	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	95.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	107	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	76.7	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493548)							
ES2509682-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	89.0	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	82.9	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	88.4	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	92.2	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	92.7	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	81.1	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	60.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493548)							
ES2509682-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	90.8	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	99.4	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	84.4	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	88.8	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	89.2	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.9	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.6	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	88.8	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	71.0	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	93.3	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	86.7	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493548)							
ES2509682-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	92.6	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493548) - continued							
ES2509682-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	112	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	87.0	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	81.7	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	95.6	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	80.3	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	91.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493548)							
ES2509682-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	90.4	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	101	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	97.3	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2509681	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 04-Apr-2025
Site	: Offsite 1	Issue Date	: 14-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.1	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT144_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✓	14-Apr-2025	30-Sep-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT144_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✓	14-Apr-2025	30-Sep-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_POT144_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✓	14-Apr-2025	30-Sep-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT144_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✓	14-Apr-2025	30-Sep-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_POT144_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✓	14-Apr-2025	30-Sep-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	8	12.50	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	8	12.50	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	8	12.50	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	8	12.50	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2509681

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.1

C-O-C number : 80514
Site : Offsite 1
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(ES24AECOMAU0012 V3)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 04-Apr-2025 17:00
Client Requested Due : 14-Apr-2025
Date

Issue Date : 08-Apr-2025
Scheduled Reporting Date : 14-Apr-2025

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : ----
Receipt Detail :

Security Seal : Intact.
Temperature : 2.2°C - Ice present
No. of samples received / analysed : 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2509681-001	03-Apr-2025 15:12	0908_POT144_250403	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



[REDACTED]		Email	[REDACTED]
-	[REDACTED]		
-	[REDACTED]		
-	[REDACTED]		
-	[REDACTED]		
-	[REDACTED]	Email	[REDACTED]
-	[REDACTED]	Email	[REDACTED]
-	[REDACTED]	Email	[REDACTED]
-	[REDACTED]	Email	[REDACTED]



61-2-8784 8556

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
Phone: [REDACTED]
ALS Compass COC Reference: 80514 # Samples: 1 Sampler: [REDACTED]
Phone: [REDACTED]
Turnaround Requirements: Standard Urgent

Special Instructions:

ALS Use Only

Custody seal intact?	<u>3.2</u>	YES	NO	N/A
☒ Free ice / frozen ice bricks upon receipt?		☒ YES	NO	N/A
Random sample temperature on receipt?				°C

Custody:

Relinquished by: <u>[REDACTED]</u>	Received by: <u>[REDACTED]</u>	Relinquished by: <u>[REDACTED]</u>	Received by: <u>[REDACTED]</u>
Date / Time: <u>04/04/2025</u> <u>1300</u>	Date / Time: <u>4/4/25</u>	Date / Time: <u>04/04/25</u> <u>17:00</u>	Date / Time: <u> </u>

E-MAILED
[REDACTED]

LAB OF ORIGIN:
NEWCASTLE

 CHAIN OF CUSTODY COC# 80514 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY:  DATE TIME: 040428 1700
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Offsite 1 ORDER NO: 60739111_1.12 PROJECT MANAGER:  PRIMARY SAMPLER:  EMAIL REPORTS TO: 		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:	
CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 6 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_POT144_250403		03/04/2025 03:12 PM	WATER	ALS 4 Non ALS 0	No	X		

Environmental Division
 Sydney
 Work Order Reference
ES2509681



Telephone : - 61-2-8784 8555



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:

Total Bottle Count: ALS: 4, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2509682**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80524**
Sampler : **[REDACTED]**
Site : **WLM SW and GW**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **91**
No. of samples analysed : **91**

Page : 1 of 61
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **04-Apr-2025 17:00**
Date Analysis Commenced : **07-Apr-2025**
Issue Date : **14-Apr-2025 17:18**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

Organic Chemist

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW278D_25040 3	0908_MW278S_25040 3	0908_MW121_250403	0908_MW897D_25040 3	0908_MW897S_25040 3
Sampling date / time					03-Apr-2025 09:45	03-Apr-2025 09:51	03-Apr-2025 12:00	03-Apr-2025 11:46	03-Apr-2025 11:45
Compound	CAS Number	LOR	Unit	ES2509682-001	ES2509682-002	ES2509682-003	ES2509682-004	ES2509682-005	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.002	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	0.03	0.02	0.04	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.008	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	0.08	0.26	0.17	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	----	----	----	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW278D_25040

0908_MW278S_25040

0908_MW121_250403

0908_MW897D_25040

0908_MW897S_25040
3

Sampling date / time

03-Apr-2025 09:45

03-Apr-2025 09:51

03-Apr-2025 12:00

03-Apr-2025 11:46

03-Apr-2025 11:45

Compound

CAS Number

LOR

Unit

ES2509682-001

ES2509682-002

ES2509682-003

ES2509682-004

ES2509682-005

Result

Result

Result

Result

Result

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	<0.01	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	<0.05	<0.05	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	----	<0.05	<0.05	<0.05

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW278D_25040 3	0908_MW278S_25040 3	0908_MW121_250403	0908_MW897D_25040 3	0908_MW897S_25040 3
Sampling date / time					03-Apr-2025 09:45	03-Apr-2025 09:51	03-Apr-2025 12:00	03-Apr-2025 11:46	03-Apr-2025 11:45
Compound	CAS Number	LOR	Unit	ES2509682-001	ES2509682-002	ES2509682-003	ES2509682-004	ES2509682-005	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW278D_25040 3	0908_MW278S_25040 3	0908_MW121_250403	0908_MW897D_25040 3	0908_MW897S_25040 3
Sampling date / time					03-Apr-2025 09:45	03-Apr-2025 09:51	03-Apr-2025 12:00	03-Apr-2025 11:46	03-Apr-2025 11:45
Compound	CAS Number	LOR	Unit	ES2509682-001	ES2509682-002	ES2509682-003	ES2509682-004	ES2509682-005	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.002	0.010	----	----	----	
Sum of PFAS	----	0.01	µg/L	----	----	0.11	0.28	0.21	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.002	0.010	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	0.11	0.28	0.21	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.002	0.010	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	0.11	0.28	0.21	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	89.4	94.1	----	----	----	
13C4-PFOS	----	0.02	%	----	----	115	91.5	107	
13C8-PFOA	----	0.002	%	93.9	92.6	----	----	----	
13C8-PFOA	----	0.02	%	----	----	102	99.1	99.6	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW106D_25040 3	0908_MW106S_25040 3	0908_MW247D_25040 3	0908_MW247S_25040 3	0908_MW123_250403
Sampling date / time				03-Apr-2025 16:20	03-Apr-2025 16:26	03-Apr-2025 12:14	03-Apr-2025 12:10	03-Apr-2025 14:38	
Compound	CAS Number	LOR	Unit	ES2509682-006	ES2509682-007	ES2509682-008	ES2509682-009	ES2509682-010	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	0.03	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	0.03	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.16	0.01	0.03	0.38	0.02	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.19	0.07	0.04	0.21	0.04	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	<0.02	<0.02	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW106D_25040 3	0908_MW106S_25040 3	0908_MW247D_25040 3	0908_MW247S_25040 3	0908_MW123_250403
Sampling date / time					03-Apr-2025 16:20	03-Apr-2025 16:26	03-Apr-2025 12:14	03-Apr-2025 12:10	03-Apr-2025 14:38
Compound	CAS Number	LOR	Unit	ES2509682-006	ES2509682-007	ES2509682-008	ES2509682-009	ES2509682-010	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%	105	103	104	106	108	
13C8-PFOA	----	0.02	%	97.2	92.7	98.0	95.6	98.8	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW126S_25040 3	0908_MW188D_25040 3	0908_MW188S_25040 3	0908_MW260S_25040 3	0908_MW178_250403
Sampling date / time				03-Apr-2025 09:31	03-Apr-2025 09:21	03-Apr-2025 09:17	03-Apr-2025 13:52	03-Apr-2025 10:40	
Compound	CAS Number	LOR	Unit	ES2509682-011	ES2509682-012	ES2509682-013	ES2509682-014	ES2509682-015	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.15	<0.02	0.04	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.22	<0.02	0.12	<0.02	0.05	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.23	<0.02	0.10	<0.02	0.05	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	2.62	<0.01	0.71	0.01	0.19	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.36	<0.02	0.08	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	3.93	0.04	2.51	0.03	0.05	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.10	<0.02	0.06	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.63	<0.02	0.23	<0.02	0.05	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.08	<0.02	0.04	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.18	<0.01	0.09	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW126S_25040 3	0908_MW188D_25040 3	0908_MW188S_25040 3	0908_MW260S_25040 3	0908_MW178_250403
Sampling date / time					03-Apr-2025 09:31	03-Apr-2025 09:21	03-Apr-2025 09:17	03-Apr-2025 13:52	03-Apr-2025 10:40
Compound	CAS Number	LOR	Unit	ES2509682-011	ES2509682-012	ES2509682-013	ES2509682-014	ES2509682-015	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%	102	101	108	102	100	
13C8-PFOA	----	0.02	%	97.8	96.0	96.3	96.4	97.8	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW118_250403	0908_MW150D_250403	0908_MW150S_250403	0908_MW255D_250403	0908_MW255S_250403
Sampling date / time				03-Apr-2025 12:48	03-Apr-2025 16:43	03-Apr-2025 16:39	03-Apr-2025 14:18	03-Apr-2025 14:22	
Compound	CAS Number	LOR	Unit	ES2509682-016	ES2509682-017	ES2509682-018	ES2509682-019	ES2509682-020	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.122	<0.002	<0.002	<0.002	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.166	<0.002	<0.002	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.004	1.37	0.006	<0.002	0.002	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.084	<0.002	<0.002	<0.002	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.246	0.024	<0.002	0.004	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.04	<0.01	<0.01	<0.01	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.02	<0.01	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.046	<0.002	<0.002	<0.002	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.234	<0.002	<0.002	<0.002	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.043	<0.002	<0.002	<0.002	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.093	<0.002	<0.002	<0.002	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW118_250403	0908_MW150D_250403	0908_MW150S_250403	0908_MW255D_250403	0908_MW255S_250403
Sampling date / time					03-Apr-2025 12:48	03-Apr-2025 16:43	03-Apr-2025 16:39	03-Apr-2025 14:18	03-Apr-2025 14:22
Compound	CAS Number	LOR	Unit	ES2509682-016	ES2509682-017	ES2509682-018	ES2509682-019	ES2509682-020	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.004	2.46	0.030	<0.002	0.006	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.004	1.62	0.030	<0.002	0.006	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.004	2.17	0.030	<0.002	0.006	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	86.8	84.8	90.8	94.6	91.1	
13C8-PFOA	----	0.002	%	97.4	98.8	94.9	99.3	95.6	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW122_250403	0908_MW125D_250403	0908_MW125S_250403	0908_MW126D_250403	0908_MW146AD_250403
Sampling date / time				03-Apr-2025 12:37	03-Apr-2025 10:25	03-Apr-2025 10:21	03-Apr-2025 09:34	03-Apr-2025 10:06	
Compound	CAS Number	LOR	Unit	ES2509682-021	ES2509682-022	ES2509682-023	ES2509682-024	ES2509682-025	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.013	<0.002	0.004	0.011	<0.002	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.013	<0.002	0.034	0.005	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.002	<0.002	<0.002	0.026	<0.002	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.004	<0.002	<0.002	0.007	<0.002	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	0.007	<0.002	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW122_250403	0908_MW125D_250403	0908_MW125S_250403	0908_MW126D_250403	0908_MW146AD_250403
Sampling date / time					03-Apr-2025 12:37	03-Apr-2025 10:25	03-Apr-2025 10:21	03-Apr-2025 09:34	03-Apr-2025 10:06
Compound	CAS Number	LOR	Unit	ES2509682-021	ES2509682-022	ES2509682-023	ES2509682-024	ES2509682-025	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.023	0.013	0.004	0.095	0.005	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.015	0.013	0.004	0.045	0.005	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.023	0.013	0.004	0.095	0.005	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	99.7	101	108	97.4	101	
13C8-PFOA	----	0.002	%	101	97.7	101	103	97.1	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW146S_25040 3	0908_MW162S_25040 3	0908_MW232D_25040 3	0908_MW232S_25040 3	0908_MW256D_25040 3
Sampling date / time				03-Apr-2025 10:02	03-Apr-2025 12:28	03-Apr-2025 08:58	03-Apr-2025 08:54	03-Apr-2025 12:57	
Compound	CAS Number	LOR	Unit	ES2509682-026	ES2509682-027	ES2509682-028	ES2509682-029	ES2509682-030	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.007	<0.002	<0.002	<0.002	<0.002	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.006	<0.002	<0.002	<0.002	0.008	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW146S_25040 3	0908_MW162S_25040 3	0908_MW232D_25040 3	0908_MW232S_25040 3	0908_MW256D_25040 3
Sampling date / time				03-Apr-2025 10:02	03-Apr-2025 12:28	03-Apr-2025 08:58	03-Apr-2025 08:54	03-Apr-2025 12:57	
Compound	CAS Number	LOR	Unit	ES2509682-026	ES2509682-027	ES2509682-028	ES2509682-029	ES2509682-030	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.013	<0.002	<0.002	<0.002	0.008	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.013	<0.002	<0.002	<0.002	0.008	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.013	<0.002	<0.002	<0.002	0.008	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	95.1	103	105	101	108	
13C8-PFOA	----	0.002	%	100	102	95.5	103	97.4	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW256S_25040 3	0908_MW257D_25040 3	0908_MW195_250403	0908_MW257S_25040 3	0908_MW260D_25040 3
Sampling date / time					03-Apr-2025 13:03	03-Apr-2025 13:14	03-Apr-2025 10:56	03-Apr-2025 13:10	03-Apr-2025 13:57
Compound	CAS Number	LOR	Unit	ES2509682-031	ES2509682-032	ES2509682-033	ES2509682-034	ES2509682-035	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	----	<0.002	0.007	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	<0.02	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	<0.02	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	----	<0.002	0.006	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	----	<0.002	0.036	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	<0.02	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	0.14	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	<0.02	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	----	<0.002	0.002	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	0.09	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	<0.02	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	<0.02	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	----	<0.01	<0.01	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	<0.01	<0.01	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	<0.1	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW256S_25040 3	0908_MW257D_25040 3	0908_MW195_250403	0908_MW257S_25040 3	0908_MW260D_25040 3
03-Apr-2025 13:03	03-Apr-2025 13:14	03-Apr-2025 10:56	03-Apr-2025 13:10	03-Apr-2025 13:57
ES2509682-031	ES2509682-032	ES2509682-033	ES2509682-034	ES2509682-035
Result	Result	Result	Result	Result

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	<0.02	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	----	<0.002	0.004
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	<0.02	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	<0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	0.01	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	<0.05	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	----	<0.05	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW256S_25040 3	0908_MW257D_25040 3	0908_MW195_250403	0908_MW257S_25040 3	0908_MW260D_25040 3
Sampling date / time					03-Apr-2025 13:03	03-Apr-2025 13:14	03-Apr-2025 10:56	03-Apr-2025 13:10	03-Apr-2025 13:57
Compound	CAS Number	LOR	Unit	ES2509682-031	ES2509682-032	ES2509682-033	ES2509682-034	ES2509682-035	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	<0.02	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	<0.05	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	<0.05	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	<0.05	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	<0.05	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	<0.02	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	<0.02	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW256S_25040 3	0908_MW257D_25040 3	0908_MW195_250403	0908_MW257S_25040 3	0908_MW260D_25040 3
Sampling date / time					03-Apr-2025 13:03	03-Apr-2025 13:14	03-Apr-2025 10:56	03-Apr-2025 13:10	03-Apr-2025 13:57
Compound	CAS Number	LOR	Unit	ES2509682-031	ES2509682-032	ES2509682-033	ES2509682-034	ES2509682-035	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	<0.05	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	<0.05	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	<0.05	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	<0.05	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	<0.002	<0.002	----	<0.002	0.055	
Sum of PFAS	----	0.01	µg/L	----	----	0.24	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	----	<0.002	0.038	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	0.23	----	----	
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	<0.002	----	<0.002	0.049	
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	0.24	----	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	98.7	102	----	106	96.5	
13C4-PFOS	----	0.02	%	----	----	105	----	----	
13C8-PFOA	----	0.002	%	102	101	----	104	101	
13C8-PFOA	----	0.02	%	----	----	96.4	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW167_250404	0908_MW168_250404	0908_MW169D_250404 4	0908_MW169S_250404 4	0908_MW166_250404
Sampling date / time				04-Apr-2025 10:20	04-Apr-2025 10:29	04-Apr-2025 10:40	04-Apr-2025 10:45	04-Apr-2025 10:13	
Compound	CAS Number	LOR	Unit	ES2509682-036	ES2509682-037	ES2509682-038	ES2509682-039	ES2509682-040	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.13	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.03	0.39	<0.02	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.35	2.89	0.14	0.10	0.35	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.10	0.21	<0.02	<0.02	0.03	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	21.6	34.9	0.09	0.15	11.4	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.09	0.29	<0.02	<0.02	0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.16	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.02	1.85	<0.02	<0.02	0.03	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.13	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.04	0.26	<0.01	<0.01	0.03	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0908_MW167_250404	0908_MW168_250404	0908_MW169D_250404 4	0908_MW169S_250404 4	0908_MW166_250404
Sampling date / time				04-Apr-2025 10:20	04-Apr-2025 10:29	04-Apr-2025 10:40	04-Apr-2025 10:45	04-Apr-2025 10:13
Compound	CAS Number	LOR	Unit	ES2509682-036	ES2509682-037	ES2509682-038	ES2509682-039	ES2509682-040
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	22.2	41.2	0.23	0.25	11.9
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	22.0	37.8	0.23	0.25	11.8
Sum of PFAS (WA DER List)	----	0.01	µg/L	22.0	40.3	0.23	0.25	11.8
EP231S: PFAS Surrogate								



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW167_250404	0908_MW168_250404	0908_MW169D_250404 4	0908_MW169S_250404 4	0908_MW166_250404
Sampling date / time					04-Apr-2025 10:20	04-Apr-2025 10:29	04-Apr-2025 10:40	04-Apr-2025 10:45	04-Apr-2025 10:13
Compound	CAS Number	LOR	Unit	ES2509682-036	ES2509682-037	ES2509682-038	ES2509682-039	ES2509682-040	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%	92.7	84.5	96.2	99.2	102	
13C8-PFOA	----	0.02	%	98.0	98.0	102	106	96.7	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW108D_25040 4	0908_MW108S_25040 4	0908_MW109D_25040 4	0908_MW175D_25040 4	0908_MW466_250404
Sampling date / time				04-Apr-2025 11:16	04-Apr-2025 11:19	04-Apr-2025 11:45	04-Apr-2025 11:31	04-Apr-2025 11:53	
Compound	CAS Number	LOR	Unit	ES2509682-041	ES2509682-042	ES2509682-043	ES2509682-044	ES2509682-045	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	<0.02	0.03	0.05	0.05	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.03	<0.02	0.04	0.05	0.04	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.15	0.65	0.84	0.84	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.03	0.05	0.04	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.29	2.11	3.50	3.40	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.05	0.08	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	0.03	0.11	0.26	0.09	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.02	0.04	0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.01	<0.01	0.04	0.07	0.05	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0908_MW108D_25040 4	0908_MW108S_25040 4	0908_MW109D_25040 4	0908_MW175D_25040 4	0908_MW466_250404
Sampling date / time				04-Apr-2025 11:16	04-Apr-2025 11:19	04-Apr-2025 11:45	04-Apr-2025 11:31	04-Apr-2025 11:53
Compound	CAS Number	LOR	Unit	ES2509682-041	ES2509682-042	ES2509682-043	ES2509682-044	ES2509682-045
				Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	94.6	104	96.9	104	96.6
13C8-PFOA	----	0.02	%	101	105	104	103	104



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW468_250404	0908_MW886_250403	0908_MW172_250401	0908_MW171D_250404 4	0908_MW202D_250401 1
Sampling date / time				04-Apr-2025 11:37	03-Apr-2025 16:06	01-Apr-2025 14:33	04-Apr-2025 10:59	01-Apr-2025 13:25	
Compound	CAS Number	LOR	Unit	ES2509682-046	ES2509682-047	ES2509682-048	ES2509682-049	ES2509682-050	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	<0.02	0.03	0.09	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.18	0.02	0.18	0.17	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.22	0.05	0.32	0.09	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	4.09	2.33	2.87	0.60	0.02	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.24	0.34	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	8.80	33.1	0.03	0.06	0.04	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.11	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.15	0.04	0.02	0.06	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.49	0.22	0.08	0.28	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.08	0.04	0.02	0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.21	0.15	0.03	0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0908_MW468_250404	0908_MW886_250403	0908_MW172_250401	0908_MW171D_250404 4	0908_MW202D_250401 1
Sampling date / time				04-Apr-2025 11:37	03-Apr-2025 16:06	01-Apr-2025 14:33	04-Apr-2025 10:59	01-Apr-2025 13:25
Compound	CAS Number	LOR	Unit	ES2509682-046	ES2509682-047	ES2509682-048	ES2509682-049	ES2509682-050
				Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	98.6	95.8	106	101	99.7
13C8-PFOA	----	0.02	%	106	106	103	104	104



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW202S_25040 1	0908_MW171S_25040 4	0908_MW179D_25040 1	0908_MW179S_25040 1	0908_MW304_250404
Sampling date / time				01-Apr-2025 13:31	04-Apr-2025 11:02	01-Apr-2025 13:44	01-Apr-2025 13:45	04-Apr-2025 08:48	
Compound	CAS Number	LOR	Unit	ES2509682-051	ES2509682-052	ES2509682-053	ES2509682-054	ES2509682-055	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.10	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.04	0.25	0.06	0.04	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.05	0.19	0.05	0.08	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.19	1.25	1.31	1.90	1.50	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.19	0.06	0.09	0.39	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.08	0.65	0.19	0.48	30.3	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.07	0.14	0.10	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.10	0.32	0.38	0.26	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.03	0.10	0.04	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	0.06	0.05	0.53	0.14	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0908_MW202S_25040 1	0908_MW171S_25040 4	0908_MW179D_25040 1	0908_MW179S_25040 1	0908_MW304_250404
Sampling date / time				01-Apr-2025 13:31	04-Apr-2025 11:02	01-Apr-2025 13:44	01-Apr-2025 13:45	04-Apr-2025 08:48
Compound	CAS Number	LOR	Unit	ES2509682-051	ES2509682-052	ES2509682-053	ES2509682-054	ES2509682-055
				Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	98.9	102	103	103	97.9
13C8-PFOA	----	0.02	%	102	108	105	102	106



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW155_250404	0908_MW406_250403	0908_MW441_250404	0908_MW208_250404	0908_MW210D_250404
Sampling date / time				04-Apr-2025 09:21	03-Apr-2025 15:46	04-Apr-2025 08:59	04-Apr-2025 09:08	04-Apr-2025 09:34
Compound	CAS Number	LOR	Unit	ES2509682-056	ES2509682-057	ES2509682-058	ES2509682-059	ES2509682-060
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.04	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.29	0.07	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.82	0.11	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.16	0.02	19.7	2.86	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	1.54	0.32	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.65	<0.01	107	23.3	0.02
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.12	0.09	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.3	0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.05	<0.02	0.62	0.20	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	<0.02	3.96	0.41	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.42	0.12	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	<0.01	1.72	0.21	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.04	0.03	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.10	<0.05	<0.05

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW155_250404	0908_MW406_250403	0908_MW441_250404	0908_MW208_250404	0908_MW210D_250404
04-Apr-2025 09:21	03-Apr-2025 15:46	04-Apr-2025 08:59	04-Apr-2025 09:08	04-Apr-2025 09:34
ES2509682-056	ES2509682-057	ES2509682-058	ES2509682-059	ES2509682-060
Result	Result	Result	Result	Result

Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.10	<0.05	<0.05
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Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.10	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.10	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.10	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.10	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.04	<0.02	<0.02

4:2:2 FT (4:2) Fluorotelomer Sulfonic Acid								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sum of PFAS	----	0.01	µg/L	0.91	0.02	136	27.8	0.02
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.81	0.02	127	26.2	0.02
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.91	0.02	134	27.3	0.02

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW155_250404	0908_MW406_250403	0908_MW441_250404	0908_MW208_250404	0908_MW210D_250404
Sampling date / time					04-Apr-2025 09:21	03-Apr-2025 15:46	04-Apr-2025 08:59	04-Apr-2025 09:08	04-Apr-2025 09:34
Compound	CAS Number	LOR	Unit		ES2509682-056	ES2509682-057	ES2509682-058	ES2509682-059	ES2509682-060
				Result	Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		102	105	105	104	102
13C8-PFOA	----	0.02	%		104	105	118	101	101



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW210S_250404	0908_QC100_250401	0908_QC103_250403	0908_QC104_250403	0908_QC105_250403
Sampling date / time				04-Apr-2025 09:36	01-Apr-2025 13:25	03-Apr-2025 10:06	03-Apr-2025 11:45	03-Apr-2025 14:18
Compound	CAS Number	LOR	Unit	ES2509682-061	ES2509682-081	ES2509682-083	ES2509682-084	ES2509682-085
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	<0.02	----	<0.02	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.11	<0.02	----	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.12	<0.02	----	<0.02	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.90	0.03	----	0.04	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.09	<0.02	----	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	0.005	----	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	2.54	0.05	----	0.17	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	<0.01	----	<0.01
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	<0.01	----	<0.01
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.1	<0.1	----	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	<0.002	----	<0.002



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW210S_250404	0908_QC100_250401	0908_QC103_250403	0908_QC104_250403	0908_QC105_250403
Sampling date / time				04-Apr-2025 09:36	01-Apr-2025 13:25	03-Apr-2025 10:06	03-Apr-2025 11:45	03-Apr-2025 14:18
Compound	CAS Number	LOR	Unit	ES2509682-061	ES2509682-081	ES2509682-083	ES2509682-084	ES2509682-085
				Result	Result	Result	Result	Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.14	<0.02	----	<0.02	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.65	<0.02	----	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.08	<0.02	----	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.13	<0.01	----	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	<0.002	----	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	<0.005	----	<0.005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	<0.05	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	<0.005	----	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	----	<0.05	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW210S_250404 4	0908_QC100_250401	0908_QC103_250403	0908_QC104_250403	0908_QC105_250403
Sampling date / time					04-Apr-2025 09:36	01-Apr-2025 13:25	03-Apr-2025 10:06	03-Apr-2025 11:45	03-Apr-2025 14:18
Compound	CAS Number	LOR	Unit	ES2509682-061	ES2509682-081	ES2509682-083	ES2509682-084	ES2509682-085	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	<0.002	----	<0.002	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	<0.02	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	<0.005	----	<0.005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	<0.05	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	<0.005	----	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	<0.05	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	<0.005	----	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	<0.05	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	<0.005	----	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	<0.05	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	<0.002	----	<0.002	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	<0.02	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	<0.002	----	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	<0.02	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	<0.005	----	<0.005	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW210S_250404	0908_QC100_250401	0908_QC103_250403	0908_QC104_250403	0908_QC105_250403
Sampling date / time				04-Apr-2025 09:36	01-Apr-2025 13:25	03-Apr-2025 10:06	03-Apr-2025 11:45	03-Apr-2025 14:18
Compound	CAS Number	LOR	Unit	ES2509682-061	ES2509682-081	ES2509682-083	ES2509682-084	ES2509682-085
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	<0.005	----	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	<0.005	----	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	<0.005	----	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	<0.05	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	----	0.005	----	<0.002
Sum of PFAS	----	0.01	µg/L	4.90	0.08	----	0.21	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	0.005	----	<0.002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	3.44	0.08	----	0.21	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	0.005	----	<0.002
Sum of PFAS (WA DER List)	----	0.01	µg/L	4.65	0.08	----	0.21	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	----	93.6	----	103
13C4-PFOS	----	0.02	%	112	108	----	98.2	----
13C8-PFOA	----	0.002	%	----	----	103	----	92.2
13C8-PFOA	----	0.02	%	98.2	104	----	108	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_QC106_250404	0908_QC107_250404	----	----	----
Sampling date / time				04-Apr-2025 09:34	04-Apr-2025 10:40	----	----	----
Compound	CAS Number	LOR	Unit	ES2509682-086	ES2509682-087	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.18	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.55	<0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	11.2	0.14	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	1.92	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	74.1	0.09	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.16	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.34	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	2.09	0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.26	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	1.23	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_QC106_250404	0908_QC107_250404	----	----	----
Sampling date / time					04-Apr-2025 09:34	04-Apr-2025 10:40	----	----	----
Compound	CAS Number	LOR	Unit		ES2509682-086	ES2509682-087	-----	-----	-----
					Result	Result	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L		<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		92.2	0.25	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		85.3	0.23	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		89.5	0.25	----	----	----
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_QC106_250404	0908_QC107_250404	----	----	----
Sampling date / time					04-Apr-2025 09:34	04-Apr-2025 10:40	----	----	----
Compound	CAS Number	LOR	Unit		ES2509682-086	ES2509682-087	-----	-----	-----
					Result	Result	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		96.3	106	----	----	----
13C8-PFOA	----	0.02	%		110	103	----	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC301_250402	0908_QC300_250401	0908_QC302_250403	0908_QC303_250404	----
Sampling date / time				02-Apr-2025 17:33	01-Apr-2025 17:34	03-Apr-2025 17:35	04-Apr-2025 12:44	----
Compound	CAS Number	LOR	Unit	ES2509682-088	ES2509682-089	ES2509682-090	ES2509682-091	-----
				Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	<0.002	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	<0.002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	----	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	<0.002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	----	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	<0.002	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	<0.01	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	<0.01	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	<0.002	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	<0.02	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC301_250402	0908_QC300_250401	0908_QC302_250403	0908_QC303_250404	----
Sampling date / time				02-Apr-2025 17:33	01-Apr-2025 17:34	03-Apr-2025 17:35	04-Apr-2025 12:44	----
Compound	CAS Number	LOR	Unit	ES2509682-088	ES2509682-089	ES2509682-090	ES2509682-091	-----
				Result	Result	Result	Result	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	<0.002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	<0.002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	<0.002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	----	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	<0.002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	<0.002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	<0.002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	<0.005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	<0.05	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	<0.005	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	----	<0.05	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC301_250402	0908_QC300_250401	0908_QC302_250403	0908_QC303_250404	----
Sampling date / time				02-Apr-2025 17:33	01-Apr-2025 17:34	03-Apr-2025 17:35	04-Apr-2025 12:44	----
Compound	CAS Number	LOR	Unit	ES2509682-088	ES2509682-089	ES2509682-090	ES2509682-091	-----
				Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	<0.002	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	<0.005	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	<0.005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	<0.005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	<0.005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	<0.002	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	<0.002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	<0.005	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC301_250402	0908_QC300_250401	0908_QC302_250403	0908_QC303_250404	----
Sampling date / time				02-Apr-2025 17:33	01-Apr-2025 17:34	03-Apr-2025 17:35	04-Apr-2025 12:44	----
Compound	CAS Number	LOR	Unit	ES2509682-088	ES2509682-089	ES2509682-090	ES2509682-091	-----
				Result	Result	Result	Result	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	<0.05	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	----	<0.002	----	----
Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	----	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	<0.002	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	<0.01	----	<0.01	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	<0.002	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	<0.01	----	<0.01	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	----	101	----	----
13C4-PFOS	----	0.02	%	102	104	----	102	----
13C8-PFOA	----	0.002	%	----	----	94.1	----	----
13C8-PFOA	----	0.02	%	109	108	----	106	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0908_SW059_250402	0908_SW047_250402	0908_SW055_250402	0908_SW108_250402	0908_SW110_250402
Sampling date / time				02-Apr-2025 09:55	02-Apr-2025 12:46	02-Apr-2025 13:42	02-Apr-2025 13:05	02-Apr-2025 13:28
Compound	CAS Number	LOR	Unit	ES2509682-062	ES2509682-063	ES2509682-064	ES2509682-065	ES2509682-066
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.12	0.04	0.05	0.03	0.04
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.15	0.07	0.06	0.05	0.05
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.60	1.19	0.69	0.75	0.75
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.10	0.09	0.04	0.06	0.04
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.10	6.91	1.72	3.95	3.94
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.04	<0.02	0.03	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.06	0.08	0.06	0.09	0.09
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.29	0.26	0.18	0.27	0.27
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.04	0.08	0.03	0.06	0.06
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.09	0.13	0.06	0.08	0.08
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW059_250402	0908_SW047_250402	0908_SW055_250402	0908_SW108_250402	0908_SW110_250402
Sampling date / time				02-Apr-2025 09:55	02-Apr-2025 12:46	02-Apr-2025 13:42	02-Apr-2025 13:05	02-Apr-2025 13:28	
Compound	CAS Number	LOR	Unit	ES2509682-062	ES2509682-063	ES2509682-064	ES2509682-065	ES2509682-066	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.07	0.20	0.19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	3.59	8.89	2.96	5.57	5.51	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	2.70	8.10	2.41	4.70	4.69	
Sum of PFAS (WA DER List)	----	0.01	µg/L	3.30	8.69	2.86	5.43	5.42	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW059_250402	0908_SW047_250402	0908_SW055_250402	0908_SW108_250402	0908_SW110_250402
Sampling date / time					02-Apr-2025 09:55	02-Apr-2025 12:46	02-Apr-2025 13:42	02-Apr-2025 13:05	02-Apr-2025 13:28
Compound	CAS Number	LOR	Unit		ES2509682-062	ES2509682-063	ES2509682-064	ES2509682-065	ES2509682-066
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.02	%		103	103	104	109	99.2
13C8-PFOA	-----	0.02	%		96.7	98.0	98.5	101	98.1



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0908_SW079_250402	0908_SW048_250402	0908_SW588_250402	0908_SW001_250402	0908_SW006_250402
Sampling date / time				02-Apr-2025 15:38	02-Apr-2025 14:03	02-Apr-2025 12:25	02-Apr-2025 10:20	02-Apr-2025 10:45
Compound	CAS Number	LOR	Unit	ES2509682-067	ES2509682-068	ES2509682-069	ES2509682-070	ES2509682-071
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.03	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.03	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.05	0.05	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.41	0.52	0.04	0.26	0.11
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.04	<0.02	0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.17	0.46	0.14	1.34	0.31
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.08	0.09	<0.02	0.06	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.06	<0.01	0.02	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW079_250402	0908_SW048_250402	0908_SW588_250402	0908_SW001_250402	0908_SW006_250402
Sampling date / time				02-Apr-2025 15:38	02-Apr-2025 14:03	02-Apr-2025 12:25	02-Apr-2025 10:20	02-Apr-2025 10:45	
Compound	CAS Number	LOR	Unit	ES2509682-067	ES2509682-068	ES2509682-069	ES2509682-070	ES2509682-071	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	0.80	1.25	0.18	1.72	0.42	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.58	0.98	0.18	1.60	0.42	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.72	1.16	0.18	1.70	0.42	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW079_250402	0908_SW048_250402	0908_SW588_250402	0908_SW001_250402	0908_SW006_250402
Sampling date / time					02-Apr-2025 15:38	02-Apr-2025 14:03	02-Apr-2025 12:25	02-Apr-2025 10:20	02-Apr-2025 10:45
Compound	CAS Number	LOR	Unit		ES2509682-067	ES2509682-068	ES2509682-069	ES2509682-070	ES2509682-071
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.02	%		105	104	103	112	95.7
13C8-PFOA	-----	0.02	%		97.7	101	94.4	101	97.6



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW007_250402	0908_SW009_250402	0908_SW060_250402	0908_SW062_250402	0908_SW081_250402
Sampling date / time				02-Apr-2025 10:36	02-Apr-2025 10:58	02-Apr-2025 09:39	02-Apr-2025 09:19	02-Apr-2025 08:59	
Compound	CAS Number	LOR	Unit	ES2509682-072	ES2509682-073	ES2509682-074	ES2509682-075	ES2509682-076	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.48	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	0.03	1.08	0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	0.03	1.17	0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.76	0.52	9.39	0.18	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.08	0.04	0.49	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	7.67	3.36	9.56	0.11	<0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.05	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.2	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.05	0.03	0.28	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.19	0.11	1.66	0.03	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.04	0.02	0.24	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.08	0.04	0.40	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW007_250402	0908_SW009_250402	0908_SW060_250402	0908_SW062_250402	0908_SW081_250402
Sampling date / time					02-Apr-2025 10:36	02-Apr-2025 10:58	02-Apr-2025 09:39	02-Apr-2025 09:19	02-Apr-2025 08:59
Compound	CAS Number	LOR	Unit		ES2509682-072	ES2509682-073	ES2509682-074	ES2509682-075	ES2509682-076
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.02	%		103	101	99.2	101	98.2
13C8-PFOA	-----	0.02	%		96.7	99.9	96.8	95.4	96.0



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0908_SW005_250402	0908_SW014_250402	0908_SW023_250402	0908_SW024_250402	0908_QC102_250402
Sampling date / time				02-Apr-2025 11:28	02-Apr-2025 11:12	02-Apr-2025 14:40	02-Apr-2025 14:55	02-Apr-2025 13:05
Compound	CAS Number	LOR	Unit	ES2509682-077	ES2509682-078	ES2509682-079	ES2509682-080	ES2509682-082
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.03
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.05
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.16	0.17	0.11	0.06	0.70
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.05
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.71	0.84	0.09	0.05	4.12
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.03
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.10
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.02	0.04	<0.02	<0.02	0.24
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.05
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.01	<0.01	<0.01	0.09
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW005_250402	0908_SW014_250402	0908_SW023_250402	0908_SW024_250402	0908_QC102_250402
Sampling date / time					02-Apr-2025 11:28	02-Apr-2025 11:12	02-Apr-2025 14:40	02-Apr-2025 14:55	02-Apr-2025 13:05
Compound	CAS Number	LOR	Unit	ES2509682-077	ES2509682-078	ES2509682-079	ES2509682-080	ES2509682-082	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	0.26	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	0.89	1.06	0.20	0.11	5.72	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.87	1.01	0.20	0.11	4.82	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.89	1.06	0.20	0.11	5.59	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW005_250402	0908_SW014_250402	0908_SW023_250402	0908_SW024_250402	0908_QC102_250402
Sampling date / time					02-Apr-2025 11:28	02-Apr-2025 11:12	02-Apr-2025 14:40	02-Apr-2025 14:55	02-Apr-2025 13:05
Compound	CAS Number	LOR	Unit		ES2509682-077	ES2509682-078	ES2509682-079	ES2509682-080	ES2509682-082
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		103	107	106	102	102
13C8-PFOA	----	0.02	%		92.5	91.8	99.0	102	106



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: RINSATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2509682	Page	: 1 of 28
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 04-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 07-Apr-2025
C-O-C number	: 80524	Issue Date	: 14-Apr-2025
Sampler	: [REDACTED]		
Site	: WLM SW and GW		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 91		
No. of samples analysed	: 91		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6493548)									
ES2509681-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6493554)									
ES2509682-021	0908_MW122_250403	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.013	0.012	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6493554) - continued									
ES2509682-021	0908_MW122_250403	EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2509682-031	0908_MW256S_250403	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6493600)									
ES2509682-003	0908_MW121_250403	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.07	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2509682-014	0908_MW260S_250403	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.03	0.04	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6493696)									
ES2509682-042	0908_MW108S_250404	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.15	0.15	0.0	0% - 50%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.29	0.28	0.0	0% - 20%



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6493696) - continued									
ES2509682-042	0908_MW108S_250404	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2509682-052	0908_MW171S_250404	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.25	1.25	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.65	0.61	6.5	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.19	0.17	8.2	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6494739)									
ES2509682-061	0908_MW210S_250404	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.90	0.89	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	2.54	2.38	6.7	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.05	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.11	0.11	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.12	0.11	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.09	0.09	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2509682-072	0908_SW007_250402	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.76	0.78	2.6	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01 (0.04)*	µg/L	7.67	7.93	3.3	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.08	0.07	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6495842)									
ES2509682-081	0908_QC100_250401	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.03	0.01	83.4	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.05	0.03	54.1	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6495842) - continued									
ES2509682-081	0908_QC100_250401	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493548)									
ES2509681-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493554)									
ES2509682-021	0908_MW122_250403	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.004	0.005	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2509682-031	0908_MW256S_250403	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493554) - continued									
ES2509682-031	0908_MW256S_250403	EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493600)									
ES2509682-003	0908_MW121_250403	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2509682-014	0908_MW260S_250403	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493696)									
ES2509682-042	0908_MW108S_250404	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6493696) - continued									
ES2509682-042	0908_MW108S_250404	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2509682-052	0908_MW171S_250404	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6494739)							
ES2509682-061	0908_MW210S_250404	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.13	0.14	0.0	0% - 50%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.65	0.66	2.1	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.1	0.1	0.0	No Limit
ES2509682-072	0908_SW007_250402	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.19	0.18	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.04	0.04	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6494739) - continued									
ES2509682-072	0908_SW007_250402	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6495842)									
ES2509682-081	0908_QC100_250401	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6493548)									
ES2509681-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6493554)									
ES2509682-021	0908_MW122_250403	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6493554) - continued									
ES2509682-021	0908_MW122_250403	EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2509682-031	0908_MW256S_250403	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6493600)									
ES2509682-003	0908_MW121_250403	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2509682-014	0908_MW260S_250403	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6493600) - continued									
ES2509682-014	0908_MW260S_250403	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6493696)									
ES2509682-042	0908_MW108S_250404	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2509682-052	0908_MW171S_250404	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6494739)									
ES2509682-061	0908_MW210S_250404	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6494739) - continued									
ES2509682-061	0908_MW210S_250404	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2509682-072	0908_SW007_250402	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6495842)									
ES2509682-081	0908_QC100_250401	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6493548)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6493548) - continued									
ES2509681-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6493554)									
ES2509682-021	0908_MW122_250403	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2509682-031	0908_MW256S_250403	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6493600)									
ES2509682-003	0908_MW121_250403	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2509682-014	0908_MW260S_250403	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6493600) - continued									
ES2509682-014	0908_MW260S_250403	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6493696)									
ES2509682-042	0908_MW108S_250404	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2509682-052	0908_MW171S_250404	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6494739)									
ES2509682-061	0908_MW210S_250404	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2509682-072	0908_SW007_250402	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6495842)									
ES2509682-081	0908_QC100_250401	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit

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 Work Order : ES2509682
 Client : AECOM AUSTRALIA PTY LTD
 Project : NSW_0908_PFASOMP_25



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6495842) - continued									
ES2509682-081	0908_QC100_250401	EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6493600)									
ES2509682-003	0908_MW121_250403	EP231X: Sum of PFAS	----	0.01	µg/L	0.11	0.10	9.5	0% - 50%
ES2509682-014	0908_MW260S_250403	EP231X: Sum of PFAS	----	0.01	µg/L	0.04	0.05	22.2	No Limit
EP231P: PFAS Sums (QC Lot: 6493696)									
ES2509682-042	0908_MW108S_250404	EP231X: Sum of PFAS	----	0.01	µg/L	0.47	0.45	4.3	0% - 20%
ES2509682-052	0908_MW171S_250404	EP231X: Sum of PFAS	----	0.01	µg/L	2.34	2.28	2.6	0% - 20%
EP231P: PFAS Sums (QC Lot: 6494739)									
ES2509682-061	0908_MW210S_250404	EP231X: Sum of PFAS	----	0.01	µg/L	4.90	4.75	3.1	0% - 20%
ES2509682-072	0908_SW007_250402	EP231X: Sum of PFAS	----	0.01 (0.04)*	µg/L	8.99	9.25	2.9	0% - 20%
EP231P: PFAS Sums (QC Lot: 6495842)									
ES2509682-081	0908_QC100_250401	EP231X: Sum of PFAS	----	0.01	µg/L	0.08	0.04	66.7	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493548)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	102	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	81.6	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	96.0	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	96.2	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	95.9	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	84.8	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	58.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493554)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	106	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	87.3	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	92.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	76.1	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	96.9	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	89.0	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	101	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493600)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	118	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	99.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	107	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	82.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	102	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	110	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493696)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	108	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.1	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	81.5	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	78.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	110	69.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493696) - continued								
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	94.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	96.1	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	82.5	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6494739)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	114	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	97.0	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	109	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	102	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	104	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	107	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	99.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6495842)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	106	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	84.1	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	96.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	88.2	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	101	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	94.7	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	90.9	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	103	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493548)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	80.9	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	90.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	81.7	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	96.7	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	87.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	90.2	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	93.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	84.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	92.5	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	65.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	100	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	87.3	65.6	133



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493554)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	92.5	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	94.3	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	86.2	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	90.6	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	103	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	93.2	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	82.1	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	112	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	97.7	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	112	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	110	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493600)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	107	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	99.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	99.2	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	98.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	98.5	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	120	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	126	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	103	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	126	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	111	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493696)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	97.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	99.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	92.6	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	94.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	92.0	69.0	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493696) - continued								
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	79.3	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	102	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	95.9	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6494739)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	106	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	105	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	96.7	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	105	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	86.9	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	90.2	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	107	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	127	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	94.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	118	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	109	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6495842)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	96.3	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	97.0	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	89.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	93.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	108	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.9	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	91.1	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	95.2	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	119	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	115	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493548)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	88.6	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	111	68.0	141



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493548) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	139	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	89.4	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	90.7	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	77.3	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	96.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493554)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	85.1	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	102	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	97.8	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	82.9	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	103	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	79.9	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	87.3	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493600)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	90.5	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	110	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	107	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	116	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	101	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	99.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	94.3	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493696)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	94.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	103	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	87.0	62.6	147

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493696) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	95.9	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	97.0	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	96.6	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	92.3	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6494739)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	102	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	114	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	115	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.5	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	109	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	94.1	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	98.9	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6495842)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	87.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	100	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	108	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	100	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	106	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	82.3	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	90.5	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493548)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	87.4	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	95.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	107	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	76.7	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493554)								



Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493554) - continued								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	97.6	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	115	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	86.2	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	101	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493600)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	96.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	96.8	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	84.7	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	119	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493696)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	102	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	106	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	106	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	83.8	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6494739)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	108	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	107	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	85.2	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	131	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6495842)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	95.8	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	124	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	91.4	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	126	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
Laboratory sample ID	Sample ID	Method: Compound	CAS Number				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493548)							
ES2509682-001	0908_MW278D_250403	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	89.0	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	82.9	72.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493548) - continued							
ES2509682-001	0908_MW278D_250403	EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	88.4	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	92.2	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	92.7	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	81.1	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	60.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493554)							
ES2509682-022	0908_MW125D_250403	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	120	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	97.0	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	86.4	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	86.4	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	98.4	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	95.3	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	86.5	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493600)							
ES2509682-007	0908_MW106S_250403	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	125	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	98.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	94.3	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	84.9	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	105	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	98.0	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	84.3	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6493696)							
ES2509682-043	0908_MW109D_250404	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	99.3	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	91.6	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	74.1	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	88.7	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	97.9	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	82.5	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	86.1	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6494739)							
ES2509682-062	0908_SW059_250402	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	128	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	105	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	108	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	# Not Determined	68.0	131



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6494739) - continued							
ES2509682-062	0908_SW059_250402	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	101	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	101	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	93.3	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6495842)							
ES2509682-080	0908_SW024_250402	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	124	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	87.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	96.3	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	93.5	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	111	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	90.9	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	91.2	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	94.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493548)							
ES2509682-001	0908_MW278D_250403	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	90.8	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	99.4	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	84.4	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	88.8	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	89.2	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.9	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.6	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	88.8	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	71.0	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	93.3	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	86.7	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493554)							
ES2509682-022	0908_MW125D_250403	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	91.2	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	102	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	102	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	97.3	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	102	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	91.8	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.8	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	122	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	122	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	101	65.0	144



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493554) - continued							
ES2509682-022	0908_MW125D_250403	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	101	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	103	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493600)							
ES2509682-007	0908_MW106S_250403	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	110	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	108	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	105	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	103	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.4	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	98.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	113	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	129	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	104	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	123	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	112	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6493696)							
ES2509682-043	0908_MW109D_250404	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	96.5	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	99.8	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	103	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	94.0	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	86.2	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	91.0	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	86.5	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	89.7	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	98.5	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	80.9	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	94.5	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	95.6	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6494739)							
ES2509682-062	0908_SW059_250402	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	113	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	121	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	105	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	91.9	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.6	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	96.1	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	114	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	126	72.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6494739) - continued							
ES2509682-062	0908_SW059_250402	EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	103	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	117	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	109	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6495842)							
ES2509682-080	0908_SW024_250402	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	99.6	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	104	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	96.2	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	108	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	116	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	91.5	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	94.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	108	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	127	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	107	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	128	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	118	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493548)							
ES2509682-001	0908_MW278D_250403	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	92.6	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	112	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	87.0	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	81.7	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	95.6	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	80.3	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	91.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493554)							
ES2509682-022	0908_MW125D_250403	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	79.7	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	99.6	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	75.3	72.3	128



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493554) - continued							
ES2509682-022	0908_MW125D_250403	EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	99.4	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	93.8	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	81.1	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493600)							
ES2509682-007	0908_MW106S_250403	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	90.8	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	81.8	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	104	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	110	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	110	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	106	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	86.5	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6493696)							
ES2509682-043	0908_MW109D_250404	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	89.3	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	110	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	105	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	95.1	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	94.2	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	89.9	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	98.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6494739)							
ES2509682-062	0908_SW059_250402	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	116	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	127	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	99.4	66.0	145



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6494739) - continued							
ES2509682-062	0908_SW059_250402	EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	114	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	95.1	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	98.6	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6495842)							
ES2509682-080	0908_SW024_250402	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	81.7	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	101	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	90.7	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	88.8	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	101	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	86.2	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	85.9	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493548)							
ES2509682-001	0908_MW278D_250403	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	90.4	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	101	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	97.3	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493554)							
ES2509682-022	0908_MW125D_250403	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	90.6	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	105	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	86.6	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	117	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493600)							
ES2509682-007	0908_MW106S_250403	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	96.9	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	84.5	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	87.3	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	125	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493696)							
ES2509682-043	0908_MW109D_250404	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	95.4	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	84.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	108	67.0	138



Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6493696) - continued							
ES2509682-043	0908_MW109D_250404	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	91.3	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6494739)							
ES2509682-062	0908_SW059_250402	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	87.4	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	119	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	114	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6495842)							
ES2509682-080	0908_SW024_250402	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	97.7	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	121	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	104	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	106	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order : ES2509682

Page : 1 of 14

Client : AECOM AUSTRALIA PTY LTD
Contact :
Project : NSW_0908_PFASOMP_25
Site : WLM SW and GW
Sampler :
Order number : 60739111_1.10.1

Laboratory : Environmental Division Sydney
Telephone : +61 2 8784 8555
Date Samples Received : 04-Apr-2025
Issue Date : 14-Apr-2025
No. of samples received : 91
No. of samples analysed : 91

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2509682--062	0908_SW059_250402	Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	ES2509682--043	0908_MW109D_250404	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	ES2509682--062	0908_SW059_250402	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	7	73	9.59	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_QC100_250401,	0908_QC300_250401	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	10-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW172_250401, 0908_MW202S_250401, 0908_MW179S_250401	0908_MW202D_250401, 0908_MW179D_250401,	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	14-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW024_250402, 0908_QC301_250402	0908_QC102_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	10-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW059_250402, 0908_SW055_250402, 0908_SW110_250402, 0908_SW048_250402, 0908_SW001_250402, 0908_SW007_250402, 0908_SW060_250402, 0908_SW081_250402, 0908_SW014_250402,	0908_SW047_250402, 0908_SW108_250402, 0908_SW079_250402, 0908_SW588_250402, 0908_SW006_250402, 0908_SW009_250402, 0908_SW062_250402, 0908_SW005_250402, 0908_SW023_250402	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	14-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW126S_250403, 0908_MW125D_250403, 0908_MW126D_250403, 0908_MW146S_250403, 0908_MW232D_250403, 0908_MW256D_250403, 0908_MW257D_250403, 0908_MW260D_250403,	0908_MW122_250403, 0908_MW125S_250403, 0908_MW146AD_250403, 0908_MW162S_250403, 0908_MW232S_250403, 0908_MW256S_250403, 0908_MW257S_250403, 0908_QC104_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	10-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW121_250403, 0908_MW897S_250403, 0908_MW106S_250403, 0908_MW247S_250403, 0908_MW188D_250403, 0908_MW260S_250403, 0908_QC103_250403, 0908_QC302_250403	0908_MW897D_250403, 0908_MW106D_250403, 0908_MW247D_250403, 0908_MW123_250403, 0908_MW188S_250403, 0908_MW178_250403, 0908_QC105_250403,	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	11-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
0908_MW278D_250403, 0908_MW118_250403, 0908_MW150S_250403, 0908_MW255S_250403, 0908_MW886_250403,	0908_MW278S_250403, 0908_MW150D_250403, 0908_MW255D_250403, 0908_MW195_250403, 0908_MW406_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	14-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC106_250404, 0908_QC303_250404	0908_QC107_250404,	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	10-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW441_250404		04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	11-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW167_250404, 0908_MW169D_250404, 0908_MW166_250404, 0908_MW108S_250404, 0908_MW175D_250404, 0908_MW468_250404, 0908_MW171S_250404, 0908_MW155_250404, 0908_MW210D_250404,	0908_MW168_250404, 0908_MW169S_250404, 0908_MW108D_250404, 0908_MW109D_250404, 0908_MW466_250404, 0908_MW171D_250404, 0908_MW304_250404, 0908_MW208_250404, 0908_MW210S_250404	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	14-Apr-2025	01-Oct-2025	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0908_QC100_250401,	0908_QC300_250401	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	10-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW172_250401, 0908_MW202S_250401, 0908_MW179S_250401	0908_MW202D_250401, 0908_MW179D_250401,	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	14-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW024_250402, 0908_QC301_250402	0908_QC102_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	10-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW059_250402, 0908_SW055_250402, 0908_SW110_250402, 0908_SW048_250402, 0908_SW001_250402, 0908_SW007_250402, 0908_SW060_250402, 0908_SW081_250402, 0908_SW014_250402,	0908_SW047_250402, 0908_SW108_250402, 0908_SW079_250402, 0908_SW588_250402, 0908_SW006_250402, 0908_SW009_250402, 0908_SW062_250402, 0908_SW005_250402, 0908_SW023_250402	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	14-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW126S_250403, 0908_MW125D_250403, 0908_MW126D_250403, 0908_MW146S_250403, 0908_MW232D_250403, 0908_MW256D_250403, 0908_MW257D_250403, 0908_MW260D_250403,	0908_MW122_250403, 0908_MW125S_250403, 0908_MW146AD_250403, 0908_MW162S_250403, 0908_MW232S_250403, 0908_MW256S_250403, 0908_MW257S_250403, 0908_QC104_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	10-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW121_250403, 0908_MW897S_250403, 0908_MW106S_250403, 0908_MW247S_250403, 0908_MW188D_250403, 0908_MW260S_250403, 0908_QC103_250403, 0908_QC302_250403	0908_MW897D_250403, 0908_MW106D_250403, 0908_MW247D_250403, 0908_MW123_250403, 0908_MW188S_250403, 0908_MW178_250403, 0908_QC105_250403,	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	11-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
0908_MW278D_250403, 0908_MW118_250403, 0908_MW150S_250403, 0908_MW255S_250403, 0908_MW886_250403,	0908_MW278S_250403, 0908_MW150D_250403, 0908_MW255D_250403, 0908_MW195_250403, 0908_MW406_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	14-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC106_250404, 0908_QC303_250404	0908_QC107_250404,	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	10-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW441_250404		04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	11-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW167_250404, 0908_MW169D_250404, 0908_MW166_250404, 0908_MW108S_250404, 0908_MW175D_250404, 0908_MW468_250404, 0908_MW171S_250404, 0908_MW155_250404, 0908_MW210D_250404,	0908_MW168_250404, 0908_MW169S_250404, 0908_MW108D_250404, 0908_MW109D_250404, 0908_MW466_250404, 0908_MW171D_250404, 0908_MW304_250404, 0908_MW208_250404, 0908_MW210S_250404	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	14-Apr-2025	01-Oct-2025	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0908_QC100_250401,	0908_QC300_250401	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	10-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW172_250401, 0908_MW202S_250401, 0908_MW179S_250401	0908_MW202D_250401, 0908_MW179D_250401,	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	14-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW024_250402, 0908_QC301_250402	0908_QC102_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	10-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW059_250402, 0908_SW055_250402, 0908_SW110_250402, 0908_SW048_250402, 0908_SW001_250402, 0908_SW007_250402, 0908_SW060_250402, 0908_SW081_250402, 0908_SW014_250402,	0908_SW047_250402, 0908_SW108_250402, 0908_SW079_250402, 0908_SW588_250402, 0908_SW006_250402, 0908_SW009_250402, 0908_SW062_250402, 0908_SW005_250402, 0908_SW023_250402	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	14-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW126S_250403, 0908_MW125D_250403, 0908_MW126D_250403, 0908_MW146S_250403, 0908_MW232D_250403, 0908_MW256D_250403, 0908_MW257D_250403, 0908_MW260D_250403,	0908_MW122_250403, 0908_MW125S_250403, 0908_MW146AD_250403, 0908_MW162S_250403, 0908_MW232S_250403, 0908_MW256S_250403, 0908_MW257S_250403, 0908_QC104_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	10-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW121_250403, 0908_MW897S_250403, 0908_MW106S_250403, 0908_MW247S_250403, 0908_MW188D_250403, 0908_MW260S_250403, 0908_QC103_250403, 0908_QC302_250403	0908_MW897D_250403, 0908_MW106D_250403, 0908_MW247D_250403, 0908_MW123_250403, 0908_MW188S_250403, 0908_MW178_250403, 0908_QC105_250403,	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	11-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides - Continued								
0908_MW278D_250403, 0908_MW118_250403, 0908_MW150S_250403, 0908_MW255S_250403, 0908_MW886_250403,	0908_MW278S_250403, 0908_MW150D_250403, 0908_MW255D_250403, 0908_MW195_250403, 0908_MW406_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	14-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC106_250404, 0908_QC303_250404	0908_QC107_250404,	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	10-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW441_250404		04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	11-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW167_250404, 0908_MW169D_250404, 0908_MW166_250404, 0908_MW108S_250404, 0908_MW175D_250404, 0908_MW468_250404, 0908_MW171S_250404, 0908_MW155_250404, 0908_MW210D_250404,	0908_MW168_250404, 0908_MW169S_250404, 0908_MW108D_250404, 0908_MW109D_250404, 0908_MW466_250404, 0908_MW171D_250404, 0908_MW304_250404, 0908_MW208_250404, 0908_MW210S_250404	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	14-Apr-2025	01-Oct-2025	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_QC100_250401,	0908_QC300_250401	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	10-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW172_250401, 0908_MW202S_250401, 0908_MW179S_250401	0908_MW202D_250401, 0908_MW179D_250401,	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	14-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW024_250402, 0908_QC301_250402	0908_QC102_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	10-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW059_250402, 0908_SW055_250402, 0908_SW110_250402, 0908_SW048_250402, 0908_SW001_250402, 0908_SW007_250402, 0908_SW060_250402, 0908_SW081_250402, 0908_SW014_250402,	0908_SW047_250402, 0908_SW108_250402, 0908_SW079_250402, 0908_SW588_250402, 0908_SW006_250402, 0908_SW009_250402, 0908_SW062_250402, 0908_SW005_250402, 0908_SW023_250402	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	14-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW126S_250403, 0908_MW125D_250403, 0908_MW126D_250403, 0908_MW146S_250403, 0908_MW232D_250403, 0908_MW256D_250403, 0908_MW257D_250403, 0908_MW260D_250403,	0908_MW122_250403, 0908_MW125S_250403, 0908_MW146AD_250403, 0908_MW162S_250403, 0908_MW232S_250403, 0908_MW256S_250403, 0908_MW257S_250403, 0908_QC104_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	10-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW121_250403, 0908_MW897S_250403, 0908_MW106S_250403, 0908_MW247S_250403, 0908_MW188D_250403, 0908_MW260S_250403, 0908_QC103_250403, 0908_QC302_250403	0908_MW897D_250403, 0908_MW106D_250403, 0908_MW247D_250403, 0908_MW123_250403, 0908_MW188S_250403, 0908_MW178_250403, 0908_QC105_250403,	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	11-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
0908_MW278D_250403, 0908_MW118_250403, 0908_MW150S_250403, 0908_MW255S_250403, 0908_MW886_250403,	0908_MW278S_250403, 0908_MW150D_250403, 0908_MW255D_250403, 0908_MW195_250403, 0908_MW406_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	14-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC106_250404, 0908_QC303_250404	0908_QC107_250404,	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	10-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW441_250404		04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	11-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW167_250404, 0908_MW169D_250404, 0908_MW166_250404, 0908_MW108S_250404, 0908_MW175D_250404, 0908_MW468_250404, 0908_MW171S_250404, 0908_MW155_250404, 0908_MW210D_250404,	0908_MW168_250404, 0908_MW169S_250404, 0908_MW108D_250404, 0908_MW109D_250404, 0908_MW466_250404, 0908_MW171D_250404, 0908_MW304_250404, 0908_MW208_250404, 0908_MW210S_250404	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	14-Apr-2025	01-Oct-2025	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0908_QC100_250401,	0908_QC300_250401	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	10-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW172_250401, 0908_MW202S_250401, 0908_MW179S_250401	0908_MW202D_250401, 0908_MW179D_250401,	01-Apr-2025	08-Apr-2025	28-Sep-2025	✔	14-Apr-2025	28-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW024_250402, 0908_QC301_250402	0908_QC102_250402,	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	10-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_SW059_250402, 0908_SW055_250402, 0908_SW110_250402, 0908_SW048_250402, 0908_SW001_250402, 0908_SW007_250402, 0908_SW060_250402, 0908_SW081_250402, 0908_SW014_250402,	0908_SW047_250402, 0908_SW108_250402, 0908_SW079_250402, 0908_SW588_250402, 0908_SW006_250402, 0908_SW009_250402, 0908_SW062_250402, 0908_SW005_250402, 0908_SW023_250402	02-Apr-2025	08-Apr-2025	29-Sep-2025	✔	14-Apr-2025	29-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW126S_250403, 0908_MW125D_250403, 0908_MW126D_250403, 0908_MW146S_250403, 0908_MW232D_250403, 0908_MW256D_250403, 0908_MW257D_250403, 0908_MW260D_250403,	0908_MW122_250403, 0908_MW125S_250403, 0908_MW146AD_250403, 0908_MW162S_250403, 0908_MW232S_250403, 0908_MW256S_250403, 0908_MW257S_250403, 0908_QC104_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	10-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW121_250403, 0908_MW897S_250403, 0908_MW106S_250403, 0908_MW247S_250403, 0908_MW188D_250403, 0908_MW260S_250403, 0908_QC103_250403, 0908_QC302_250403	0908_MW897D_250403, 0908_MW106D_250403, 0908_MW247D_250403, 0908_MW123_250403, 0908_MW188S_250403, 0908_MW178_250403, 0908_QC105_250403,	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	11-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums - Continued								
0908_MW278D_250403, 0908_MW118_250403, 0908_MW150S_250403, 0908_MW255S_250403, 0908_MW886_250403,	0908_MW278S_250403, 0908_MW150D_250403, 0908_MW255D_250403, 0908_MW195_250403, 0908_MW406_250403	03-Apr-2025	08-Apr-2025	30-Sep-2025	✔	14-Apr-2025	30-Sep-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC106_250404, 0908_QC303_250404	0908_QC107_250404,	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	10-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW441_250404		04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	11-Apr-2025	01-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW167_250404, 0908_MW169D_250404, 0908_MW166_250404, 0908_MW108S_250404, 0908_MW175D_250404, 0908_MW468_250404, 0908_MW171S_250404, 0908_MW155_250404, 0908_MW210D_250404,	0908_MW168_250404, 0908_MW169S_250404, 0908_MW108D_250404, 0908_MW109D_250404, 0908_MW466_250404, 0908_MW171D_250404, 0908_MW304_250404, 0908_MW208_250404, 0908_MW210S_250404	04-Apr-2025	08-Apr-2025	01-Oct-2025	✔	14-Apr-2025	01-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	3	27	11.11	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	7	73	9.59	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	27	7.41	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	73	5.48	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	27	7.41	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	73	5.48	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	27	7.41	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	73	5.48	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2509682**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80524**
Site : **WLM SW and GW**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 6**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **04-Apr-2025 17:00**
Client Requested Due : **14-Apr-2025**
Date

Issue Date : **09-Apr-2025**
Scheduled Reporting Date : **14-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **----**
Receipt Detail :

Security Seal : **Intact.**
Temperature : **2.2°C - Ice present**
No. of samples received / analysed : **91 / 91**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **09/04/2025: This is an updated SRN reflecting amendments to Sample ES2509682-030 Date and Time to 03/04/2025 12:57 PM and ES2509682-085 ID to 0908_QC105_250403.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2509682-001	03-Apr-2025 09:45	0908_MW278D_250403		✓
ES2509682-002	03-Apr-2025 09:51	0908_MW278S_250403		✓
ES2509682-003	03-Apr-2025 12:00	0908_MW121_250403	✓	
ES2509682-004	03-Apr-2025 11:46	0908_MW897D_250403	✓	
ES2509682-005	03-Apr-2025 11:45	0908_MW897S_250403	✓	
ES2509682-006	03-Apr-2025 16:20	0908_MW106D_250403	✓	
ES2509682-007	03-Apr-2025 16:26	0908_MW106S_250403	✓	
ES2509682-008	03-Apr-2025 12:14	0908_MW247D_250403	✓	
ES2509682-009	03-Apr-2025 12:10	0908_MW247S_250403	✓	
ES2509682-010	03-Apr-2025 14:38	0908_MW123_250403	✓	
ES2509682-011	03-Apr-2025 09:31	0908_MW126S_250403	✓	
ES2509682-012	03-Apr-2025 09:21	0908_MW188D_250403	✓	
ES2509682-013	03-Apr-2025 09:17	0908_MW188S_250403	✓	
ES2509682-014	03-Apr-2025 13:52	0908_MW260S_250403	✓	
ES2509682-015	03-Apr-2025 10:40	0908_MW178_250403	✓	
ES2509682-016	03-Apr-2025 12:48	0908_MW118_250403		✓
ES2509682-017	03-Apr-2025 16:43	0908_MW150D_250403		✓
ES2509682-018	03-Apr-2025 16:39	0908_MW150S_250403		✓
ES2509682-019	03-Apr-2025 14:18	0908_MW255D_250403		✓
ES2509682-020	03-Apr-2025 14:22	0908_MW255S_250403		✓
ES2509682-021	03-Apr-2025 12:37	0908_MW122_250403		✓
ES2509682-022	03-Apr-2025 10:25	0908_MW125D_250403		✓
ES2509682-023	03-Apr-2025 10:21	0908_MW125S_250403		✓
ES2509682-024	03-Apr-2025 09:34	0908_MW126D_250403		✓
ES2509682-025	03-Apr-2025 10:06	0908_MW146AD_250403		✓
ES2509682-026	03-Apr-2025 10:02	0908_MW146S_250403		✓
ES2509682-027	03-Apr-2025 12:28	0908_MW162S_250403		✓
ES2509682-028	03-Apr-2025 08:58	0908_MW232D_250403		✓
ES2509682-029	03-Apr-2025 08:54	0908_MW232S_250403		✓
ES2509682-030	03-Apr-2025 12:57	0908_MW256D_250403		✓
ES2509682-031	03-Apr-2025 13:03	0908_MW256S_250403		✓
ES2509682-032	03-Apr-2025 13:14	0908_MW257D_250403		✓
ES2509682-033	03-Apr-2025 10:56	0908_MW195_250403	✓	
ES2509682-034	03-Apr-2025 13:10	0908_MW257S_250403		✓
ES2509682-035	03-Apr-2025 13:57	0908_MW260D_250403		✓



			WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2509682-036	04-Apr-2025 10:20	0908_MW167_250404	✓	
ES2509682-037	04-Apr-2025 10:29	0908_MW168_250404	✓	
ES2509682-038	04-Apr-2025 10:40	0908_MW169D_250404	✓	
ES2509682-039	04-Apr-2025 10:45	0908_MW169S_250404	✓	
ES2509682-040	04-Apr-2025 10:13	0908_MW166_250404	✓	
ES2509682-041	04-Apr-2025 11:16	0908_MW108D_250404	✓	
ES2509682-042	04-Apr-2025 11:19	0908_MW108S_250404	✓	
ES2509682-043	04-Apr-2025 11:45	0908_MW109D_250404	✓	
ES2509682-044	04-Apr-2025 11:31	0908_MW175D_250404	✓	
ES2509682-045	04-Apr-2025 11:53	0908_MW466_250404	✓	
ES2509682-046	04-Apr-2025 11:37	0908_MW468_250404	✓	
ES2509682-047	03-Apr-2025 16:06	0908_MW886_250403	✓	
ES2509682-048	01-Apr-2025 14:33	0908_MW172_250401	✓	
ES2509682-049	04-Apr-2025 10:59	0908_MW171D_250404	✓	
ES2509682-050	01-Apr-2025 13:25	0908_MW202D_250401	✓	
ES2509682-051	01-Apr-2025 13:31	0908_MW202S_250401	✓	
ES2509682-052	04-Apr-2025 11:02	0908_MW171S_250404	✓	
ES2509682-053	01-Apr-2025 13:44	0908_MW179D_250401	✓	
ES2509682-054	01-Apr-2025 13:45	0908_MW179S_250401	✓	
ES2509682-055	04-Apr-2025 08:48	0908_MW304_250404	✓	
ES2509682-056	04-Apr-2025 09:21	0908_MW155_250404	✓	
ES2509682-057	03-Apr-2025 15:46	0908_MW406_250403	✓	
ES2509682-058	04-Apr-2025 08:59	0908_MW441_250404	✓	
ES2509682-059	04-Apr-2025 09:08	0908_MW208_250404	✓	
ES2509682-060	04-Apr-2025 09:34	0908_MW210D_250404	✓	
ES2509682-061	04-Apr-2025 09:36	0908_MW210S_250404	✓	
ES2509682-062	02-Apr-2025 09:55	0908_SW059_250402	✓	
ES2509682-063	02-Apr-2025 12:46	0908_SW047_250402	✓	
ES2509682-064	02-Apr-2025 13:42	0908_SW055_250402	✓	
ES2509682-065	02-Apr-2025 13:05	0908_SW108_250402	✓	
ES2509682-066	02-Apr-2025 13:28	0908_SW110_250402	✓	
ES2509682-067	02-Apr-2025 15:38	0908_SW079_250402	✓	
ES2509682-068	02-Apr-2025 14:03	0908_SW048_250402	✓	
ES2509682-069	02-Apr-2025 12:25	0908_SW588_250402	✓	
ES2509682-070	02-Apr-2025 10:20	0908_SW001_250402	✓	
ES2509682-071	02-Apr-2025 10:45	0908_SW006_250402	✓	
ES2509682-072	02-Apr-2025 10:36	0908_SW007_250402	✓	
ES2509682-073	02-Apr-2025 10:58	0908_SW009_250402	✓	
ES2509682-074	02-Apr-2025 09:39	0908_SW060_250402	✓	
ES2509682-075	02-Apr-2025 09:19	0908_SW062_250402	✓	
ES2509682-076	02-Apr-2025 08:59	0908_SW081_250402	✓	



			WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2509682-077	02-Apr-2025 11:28	0908_SW005_250402	✓	
ES2509682-078	02-Apr-2025 11:12	0908_SW014_250402	✓	
ES2509682-079	02-Apr-2025 14:40	0908_SW023_250402	✓	
ES2509682-080	02-Apr-2025 14:55	0908_SW024_250402	✓	
ES2509682-081	01-Apr-2025 13:25	0908_QC100_250401	✓	
ES2509682-082	02-Apr-2025 13:05	0908_QC102_250402	✓	
ES2509682-083	03-Apr-2025 10:06	0908_QC103_250403		✓
ES2509682-084	03-Apr-2025 11:45	0908_QC104_250403	✓	
ES2509682-085	03-Apr-2025 14:18	0908_QC105_250403		✓
ES2509682-086	04-Apr-2025 09:34	0908_QC106_250404	✓	
ES2509682-087	04-Apr-2025 10:40	0908_QC107_250404	✓	
ES2509682-088	02-Apr-2025 17:33	0908_QC301_250402	✓	
ES2509682-089	01-Apr-2025 17:34	0908_QC300_250401	✓	
ES2509682-090	03-Apr-2025 17:35	0908_QC302_250403		✓
ES2509682-091	04-Apr-2025 12:44	0908_QC303_250404	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]
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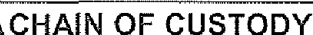
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ALS Laboratory: ES Sydney
Environmental

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

040425 1700

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW 0908 PFASOMP 25

SITE: WLM SW and GW

ORDER NO: 60739111 1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

SAMPLER MOBILE:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
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Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
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Random Sample Temperature on Receipt: °C

Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW278D_250403		03/04/2025 09:45 AM	WATER	ALS: 4 Non ALS: 0	No		X		
002	0908_MW278S_250403		03/04/2025 09:51 AM	WATER	ALS: 4 Non ALS: 0	No		X		
003	0908_MW121_250403		03/04/2025 12:00 PM	WATER	ALS: 4 Non ALS: 0	No	X			
004	0908_MW897D_250403		03/04/2025 11:45 AM	WATER	ALS: 4 Non ALS: 0	No	X			
005	0908_MW897S_250403		03/04/2025 11:45 AM	WATER	ALS: 4 Non ALS: 0	No	X			
006	0908_MW106D_250403		03/04/2025 04:20 PM	WATER	ALS: 4 Non ALS: 0	No	X			
007	0908_MW106S_250403		03/04/2025 04:26 PM	WATER	ALS: 4 Non ALS: 0	No	X			

Environmental Division
Sydney

Work Order Reference
ES2509682



Telephone : - 61-2-8784 8555



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:



CHAIN OF CUSTODY

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: -C

Other comments:

SAMPLE DETAILS**ANALYSIS REQUIRED**

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	0908_MW178_250403		03/04/2025 10:40 AM	WATER	ALS 4 Non ALS 0	No	X			
016	0908_MW118_250403		03/04/2025 12:48 PM	WATER	ALS 4 Non ALS 0	No		X		
017	0908_MW150D_250403		03/04/2025 04:43 PM	WATER	ALS 4 Non ALS 0	No		X		
018	0908_MW150S_250403		03/04/2025 04:39 PM	WATER	ALS 4 Non ALS 0	No		X		
019	0908_MW255D_250403		03/04/2025 02:18 PM	WATER	ALS 4 Non ALS 0	No		X		
020	0908_MW255S_250403		03/04/2025 02:22 PM	WATER	ALS 4 Non ALS 0	No		X		
021	0908_MW122_250403		03/04/2025 12:37 PM	WATER	ALS 4 Non ALS 0	No		X		



CHAIN OF CUSTODY

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

CONTACT PH:

SAMPLER MOBILE:

PRIMARY SAMPLER:

QUOTE NO. ES24AECOMAU0012 V3 / ES2024AECOMAU001

2

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
022	0908_MW125D_250403		03/04/2025 10:25 AM	WATER	ALS 4 Non ALS 0	No		X		
023	0908_MW125S_250403		03/04/2025 10:21 AM	WATER	ALS 4 Non ALS 0	No		X		
024	0908_MW126D_250403		03/04/2025 09:34 AM	WATER	ALS 4 Non ALS 0	No		X		
025	0908_MW146AD_250403		03/04/2025 10:06 AM	WATER	ALS 4 Non ALS 0	No		X		
026	0908_MW146S_250403		03/04/2025 10:02 AM	WATER	ALS 4 Non ALS 0	No		X		
027	0908_MW162S_250403		03/04/2025 12:28 PM	WATER	ALS 4 Non ALS 0	No		X		
028	0908_MW232D_250403		03/04/2025 08:58 AM	WATER	ALS 4 Non ALS 0	No		X		



ALS Laboratory: ES Sydney
Environmental

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

EMAIL REPORTS TO:

Biohazard info:

Other comments:

5 of 26



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:

6 of 26



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
050	0908_MW202D_250401		01/04/2025 01:25 PM	WATER	ALS 4 Non ALS 0	No	X			
051	0908_MW202S_250401		01/04/2025 01:31 PM	WATER	ALS 4 Non ALS 0	No	X			
052	0908_MW171S_250404		04/04/2025 11:02 AM	WATER	ALS 4 Non ALS 0	No	X			
053	0908_MW179D_250401		01/04/2025 01:44 PM	WATER	ALS 4 Non ALS 0	No	X			
054	0908_MW179S_250401		01/04/2025 01:45 PM	WATER	ALS 4 Non ALS 0	No	X			
055	0908_MW304_250404		04/04/2025 08:48 AM	WATER	ALS 4 Non ALS 0	No	X			
056	0908_MW155_250404		04/04/2025 09:21 AM	WATER	ALS: 4 Non ALS 0	No	X			



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:

9 of 26



ALS Laboratory: ES Sydney
Environmental

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

Other comments:

 CHAIN OF CUSTODY COC#: 80524 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: WLM SW and GW ORDER NO: 80739111_1.12 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:	
CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
071	0908_SW006_250402		02/04/2025 10:45 AM	WATER	ALS 4 Non ALS 0	No	X			
072	0908_SW007_250402		02/04/2025 10:36 AM	WATER	ALS 4 Non ALS 0	No	X			
073	0908_SW009_250402		02/04/2025 10:58 AM	WATER	ALS 4 Non ALS 0	No	X			
074	0908_SW060_250402		02/04/2025 09:39 AM	WATER	ALS 4 Non ALS 0	No	X			
075	0908_SW062_250402		02/04/2025 09:19 AM	WATER	ALS 4 Non ALS 0	No	X			
076	0908_SW081_250402		02/04/2025 08:59 AM	WATER	ALS 4 Non ALS 0	No	X			
077	0908_SW005_250402		02/04/2025 11:28 AM	WATER	ALS 4 Non ALS 0	No	X			



CHAIN OF CUSTODY

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

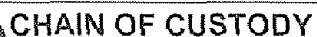
Other comments:

EMAIL REPORTS TO:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
078	0908_SW014_250402		02/04/2025 11:12 AM	WATER	ALS 4 Non ALS 0	No	X			
079	0908_SW023_250402		02/04/2025 02:40 PM	WATER	ALS 4 Non ALS 0	No	X			
080	0908_SW024_250402		02/04/2025 02:55 PM	WATER	ALS 4 Non ALS 0	No	X			
081	0908_QC100_250401		01/04/2025 01:25 PM	WATER	ALS 4 Non ALS 0	No	X			
082	0908_QC102_250402		02/04/2025 01:05 PM	WATER	ALS 4 Non ALS 0	No	X			
083	0908_QC103_250403		03/04/2025 10:06 AM	WATER	ALS 4 Non ALS 0	No		X		
084	0908_QC104_250404		03/04/2025 11:45 AM	WATER	ALS 4 Non ALS 0	No	X			



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

EMAIL REPORTS TO:

Biohazard info:

C

Other comments:

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
085	0908_QC104_250403		03/04/2025 02:16 PM	WATER	ALS: 4 Non ALS: 0	No		X		
086	0908_QC106_250404		04/04/2025 09:34 AM	WATER	ALS: 4 Non ALS: 0	No	X			
087	0908_QC107_250404		04/04/2025 10:40 AM	WATER	ALS: 4 Non ALS: 0	No	X			
088	0908_QC301_250402		02/04/2025 05:33 PM	WATER	ALS: 3 Non ALS: 0	No	X			
089	0908_QC300_250301		01/04/2025 05:34 PM	WATER	ALS: 4 Non ALS: 0	No	X			
090	0908_QC302_250403		04/04/2025 06:36 PM	WATER	ALS: 4 Non ALS: 0	No		X		
091	0908_QC303_250404		04/04/2025 12:44 PM	WATER	ALS: 4 Non ALS: 0	No	X			



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:

Friday, April 4, 2025 2:19:56 AM

 CHAIN OF CUSTODY COC#: 80524 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
		DATE TIME:		DATE TIME:		DATE TIME:		DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.12 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:					
		CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012							

007	0908_MW106S_250403	HDPE (no PTFE)	20 mL	00352407198344	Grey	No	
007	0908_MW106S_250403	HDPE (no PTFE)	20 mL	00352407198306	Grey	No	
008	0908_MW247D_250403	HDPE (no PTFE)	20 mL	00352407198298	Grey	No	
008	0908_MW247D_250403	HDPE (no PTFE)	20 mL	00352407198348	Grey	No	
008	0908_MW247D_250403	HDPE (no PTFE)	20 mL	00352407198203	Grey	No	
008	0908_MW247D_250403	HDPE (no PTFE)	20 mL	00352407198169	Grey	No	
009	0908_MW247S_250403	HDPE (no PTFE)	20 mL	00352407198289	Grey	No	
009	0908_MW247S_250403	HDPE (no PTFE)	20 mL	00352407063284	Grey	No	
009	0908_MW247S_250403	HDPE (no PTFE)	20 mL	00352407198226	Grey	No	
009	0908_MW247S_250403	HDPE (no PTFE)	20 mL	00352407063108	Grey	No	
010	0908_MW123_250403	HDPE (no PTFE)	20 mL	00352407198404	Grey	No	
010	0908_MW123_250403	HDPE (no PTFE)	20 mL	00352407198172	Grey	No	
010	0908_MW123_250403	HDPE (no PTFE)	20 mL	00352407198250	Grey	No	
010	0908_MW123_250403	HDPE (no PTFE)	20 mL	00352407198239	Grey	No	
011	0908_MW126S_250403	HDPE (no PTFE)	20 mL	00352407198287	Grey	No	
011	0908_MW126S_250403	HDPE (no PTFE)	20 mL	00352407198190	Grey	No	
011	0908_MW126S_250403	HDPE (no PTFE)	20 mL	00352407198333	Grey	No	
011	0908_MW126S_250403	HDPE (no PTFE)	20 mL	00352407198199	Grey	No	
012	0908_MW188D_250403	HDPE (no PTFE)	20 mL	00352407198191	Grey	No	
012	0908_MW188D_250403	HDPE (no PTFE)	20 mL	00352407198175	Grey	No	
012	0908_MW188D_250403	HDPE (no PTFE)	20 mL	00352407198220	Grey	No	
012	0908_MW188D_250403	HDPE (no PTFE)	20 mL	00352407198391	Grey	No	
013	0908_MW188S_250403	HDPE (no PTFE)	20 mL	00352407198428	Grey	No	
013	0908_MW188S_250403	HDPE (no PTFE)	20 mL	00352407063327	Grey	No	
013	0908_MW188S_250403	HDPE (no PTFE)	20 mL	00352407198307	Grey	No	
013	0908_MW188S_250403	HDPE (no PTFE)	20 mL	00352407063294	Grey	No	
014	0908_MW260S_250403	HDPE (no PTFE)	20 mL	00352407198295	Grey	No	



CHAIN OF CUSTODY

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

Other comments:

EMAIL REPORTS TO:

014	0908_MW260S_250403	HDPE (no PTFE)	20 mL	00352407198446	Grey	No	
014	0908_MW260S_250403	HDPE (no PTFE)	20 mL	00352407198226	Grey	No	
014	0908_MW260S_250403	HDPE (no PTFE)	20 mL	00352407198343	Grey	No	
015	0908_MW178_250403	HDPE (no PTFE)	20 mL	00352407198276	Grey	No	
015	0908_MW178_250403	HDPE (no PTFE)	20 mL	00352407198198	Grey	No	
015	0908_MW178_250403	HDPE (no PTFE)	20 mL	00352407198178	Grey	No	
015	0908_MW178_250403	HDPE (no PTFE)	20 mL	00352407198424	Grey	No	
016	0908_MW118_250403	HDPE (no PTFE)	20 mL	00352407198321	Grey	No	
016	0908_MW118_250403	HDPE (no PTFE)	20 mL	00352407198339	Grey	No	
016	0908_MW118_250403	HDPE (no PTFE)	20 mL	00352407198418	Grey	No	
016	0908_MW118_250403	HDPE (no PTFE)	20 mL	00352407198268	Grey	No	
017	0908_MW150D_250403	HDPE (no PTFE)	20 mL	00352407198393	Grey	No	
017	0908_MW150D_250403	HDPE (no PTFE)	20 mL	00352309010658	Grey	No	
017	0908_MW150D_250403	HDPE (no PTFE)	20 mL	00352309010787	Grey	No	
017	0908_MW150D_250403	HDPE (no PTFE)	20 mL	00352407198362	Grey	No	
018	0908_MW150S_250403	HDPE (no PTFE)	20 mL	00352407198435	Grey	No	
018	0908_MW150S_250403	HDPE (no PTFE)	20 mL	00352407198275	Grey	No	
018	0908_MW150S_250403	HDPE (no PTFE)	20 mL	00352407198217	Grey	No	
018	0908_MW150S_250403	HDPE (no PTFE)	20 mL	00352407198177	Grey	No	
019	0908_MW255D_250403	HDPE (no PTFE)	20 mL	00352407198299	Grey	No	
019	0908_MW255D_250403	HDPE (no PTFE)	20 mL	00352407198256	Grey	No	
019	0908_MW255D_250403	HDPE (no PTFE)	20 mL	00352407198152	Grey	No	
019	0908_MW255D_250403	HDPE (no PTFE)	20 mL	00352407198176	Grey	No	
020	0908_MW255S_250403	HDPE (no PTFE)	20 mL	00352407198291	Grey	No	
020	0908_MW255S_250403	HDPE (no PTFE)	20 mL	00352407198405	Grey	No	
020	0908_MW255S_250403	HDPE (no PTFE)	20 mL	00352407198170	Grey	No	
020	0908_MW255S_250403	HDPE (no PTFE)	20 mL	00352407198322	Grey	No	

**CHAIN OF CUSTODY**

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001
2

SAMPLER MOBILE:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

EMAIL REPORTS TO:

021	0908_MW122_250403	HDPE (no PTFE)	20 mL	00352407063157	Grey	No	
021	0908_MW122_250403	HDPE (no PTFE)	20 mL	00352407198280	Grey	No	
021	0908_MW122_250403	HDPE (no PTFE)	20 mL	00352407198319	Grey	No	
021	0908_MW122_250403	HDPE (no PTFE)	20 mL	00352407063262	Grey	No	
022	0908_MW125D_250403	HDPE (no PTFE)	20 mL	00352407198251	Grey	No	
022	0908_MW125D_250403	HDPE (no PTFE)	20 mL	00352407198258	Grey	No	
022	0908_MW125D_250403	HDPE (no PTFE)	20 mL	00352407198425	Grey	No	
022	0908_MW125D_250403	HDPE (no PTFE)	20 mL	00352407198313	Grey	No	
023	0908_MW125S_250403	HDPE (no PTFE)	20 mL	00352407198360	Grey	No	
023	0908_MW125S_250403	HDPE (no PTFE)	20 mL	00352407198246	Grey	No	
023	0908_MW125S_250403	HDPE (no PTFE)	20 mL	00352407198407	Grey	No	
023	0908_MW125S_250403	HDPE (no PTFE)	20 mL	00352407198257	Grey	No	
024	0908_MW126D_250403	HDPE (no PTFE)	20 mL	00352407198192	Grey	No	
024	0908_MW126D_250403	HDPE (no PTFE)	20 mL	00352407063241	Grey	No	
024	0908_MW126D_250403	HDPE (no PTFE)	20 mL	00352407063097	Grey	No	
024	0908_MW126D_250403	HDPE (no PTFE)	20 mL	00352407198370	Grey	No	
025	0908_MW146AD_250403	HDPE (no PTFE)	20 mL	00352407198422	Grey	No	
025	0908_MW146AD_250403	HDPE (no PTFE)	20 mL	00352407198282	Grey	No	
025	0908_MW146AD_250403	HDPE (no PTFE)	20 mL	00352407063225	Grey	No	
025	0908_MW146AD_250403	HDPE (no PTFE)	20 mL	00352407063269	Grey	No	
026	0908_MW146S_250403	HDPE (no PTFE)	20 mL	00352407063267	Grey	No	
026	0908_MW146S_250403	HDPE (no PTFE)	20 mL	00352407063147	Grey	No	
026	0908_MW146S_250403	HDPE (no PTFE)	20 mL	00352407063175	Grey	No	
026	0908_MW146S_250403	HDPE (no PTFE)	20 mL	00352407063000	Grey	No	
027	0908_MW162S_250403	HDPE (no PTFE)	20 mL	00352407198156	Grey	No	
027	0908_MW162S_250403	HDPE (no PTFE)	20 mL	00352407198423	Grey	No	
027	0908_MW162S_250403	HDPE (no PTFE)	20 mL	00352407198263	Grey	No	

**CHAIN OF CUSTODY**

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001
2

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

027	0908_MW162S_250403	HDPE (no PTFE)	20 mL	00352407198443	Grey	No	
028	0908_MW232D_250403	HDPE (no PTFE)	20 mL	00352407198151	Grey	No	
028	0908_MW232D_250403	HDPE (no PTFE)	20 mL	00352407198353	Grey	No	
028	0908_MW232D_250403	HDPE (no PTFE)	20 mL	00352407198325	Grey	No	
028	0908_MW232D_250403	HDPE (no PTFE)	20 mL	00352407198402	Grey	No	
029	0908_MW232S_250403	HDPE (no PTFE)	20 mL	00352407063082	Grey	No	
029	0908_MW232S_250403	HDPE (no PTFE)	20 mL	00352407198387	Grey	No	
029	0908_MW232S_250403	HDPE (no PTFE)	20 mL	00352407063296	Grey	No	
029	0908_MW232S_250403	HDPE (no PTFE)	20 mL	00352407198392	Grey	No	
030	0908_MW256D_250403	HDPE (no PTFE)	20 mL	00352407198244	Grey	No	
030	0908_MW256D_250403	HDPE (no PTFE)	20 mL	00352407198385	Grey	No	
030	0908_MW256D_250403	HDPE (no PTFE)	20 mL	00352407198363	Grey	No	
030	0908_MW256D_250403	HDPE (no PTFE)	20 mL	00352407198304	Grey	No	
031	0908_MW256S_250403	HDPE (no PTFE)	20 mL	00352407198167	Grey	No	
031	0908_MW256S_250403	HDPE (no PTFE)	20 mL	00352407198302	Grey	No	
031	0908_MW256S_250403	HDPE (no PTFE)	20 mL	00352407198421	Grey	No	
031	0908_MW256S_250403	HDPE (no PTFE)	20 mL	00352407198183	Grey	No	
032	0908_MW257D_250403	HDPE (no PTFE)	20 mL	00352407198432	Grey	No	
032	0908_MW257D_250403	HDPE (no PTFE)	20 mL	00352407063491	Grey	No	
032	0908_MW257D_250403	HDPE (no PTFE)	20 mL	00352407063298	Grey	No	
032	0908_MW257D_250403	HDPE (no PTFE)	20 mL	00352407198221	Grey	No	
033	0908_MW195_250403	HDPE (no PTFE)	20 mL	00352407198380	Grey	No	
033	0908_MW195_250403	HDPE (no PTFE)	20 mL	00352407063203	Grey	No	
033	0908_MW195_250403	HDPE (no PTFE)	20 mL	00352407198356	Grey	No	
033	0908_MW195_250403	HDPE (no PTFE)	20 mL	00352407063155	Grey	No	
034	0908_MW257S_250403	HDPE (no PTFE)	20 mL	00352407198429	Grey	No	
034	0908_MW257S_250403	HDPE (no PTFE)	20 mL	00352407198211	Grey	No	

 CHAIN OF CUSTODY COC#: 80524 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.12 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:	LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:		
CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					

034	0908_MW257S_250403	HDPE (no PTFE)	20 mL	00352407198438	Grey	No	
034	0908_MW257S_250403	HDPE (no PTFE)	20 mL	00352407198205	Grey	No	
035	0908_MW260D_250403	HDPE (no PTFE)	20 mL	00352407198157	Grey	No	
035	0908_MW260D_250403	HDPE (no PTFE)	20 mL	00352407198238	Grey	No	
035	0908_MW260D_250403	HDPE (no PTFE)	20 mL	00352407198430	Grey	No	
035	0908_MW260D_250403	HDPE (no PTFE)	20 mL	00352407198154	Grey	No	
036	0908_MW167_250404	HDPE (no PTFE)	20 mL	00352407185798	Grey	No	
036	0908_MW167_250404	HDPE (no PTFE)	20 mL	00352407185821	Grey	No	
036	0908_MW167_250404	HDPE (no PTFE)	20 mL	00352407198357	Grey	No	
036	0908_MW167_250404	HDPE (no PTFE)	20 mL	00352407198277	Grey	No	
037	0908_MW168_250404	HDPE (no PTFE)	20 mL	00352407185806	Grey	No	
037	0908_MW168_250404	HDPE (no PTFE)	20 mL	00350822025836	Grey	No	
037	0908_MW168_250404	HDPE (no PTFE)	20 mL	00352407185788	Grey	No	
037	0908_MW168_250404	HDPE (no PTFE)	20 mL	00350822025915	Grey	No	
038	0908_MW169D_250404	HDPE (no PTFE)	20 mL	00352407198203	Grey	No	
038	0908_MW169D_250404	HDPE (no PTFE)	20 mL	00350822025952	Grey	No	
038	0908_MW169D_250404	HDPE (no PTFE)	20 mL	00350822026032	Grey	No	
038	0908_MW169D_250404	HDPE (no PTFE)	20 mL	00352407198153	Grey	No	
039	0908_MW169S_250404	HDPE (no PTFE)	20 mL	00352407185797	Grey	No	
039	0908_MW169S_250404	HDPE (no PTFE)	20 mL	00352407185904	Grey	No	
039	0908_MW169S_250404	HDPE (no PTFE)	20 mL	00352407185863	Grey	No	
039	0908_MW169S_250404	HDPE (no PTFE)	20 mL	00352407186002	Grey	No	
040	0908_MW168_250404	HDPE (no PTFE)	20 mL	00352407186050	Grey	No	
040	0908_MW168_250404	HDPE (no PTFE)	20 mL	00352407185820	Grey	No	
040	0908_MW168_250404	HDPE (no PTFE)	20 mL	00352407186013	Grey	No	
040	0908_MW166_250404	HDPE (no PTFE)	20 mL	00352407186008	Grey	No	
041	0908_MW108D_250404	HDPE (no PTFE)	20 mL	90352309010568	Grey	No	

**CHAIN OF CUSTODY**

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

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DATE TIME:

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DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFSOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

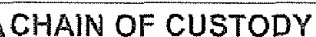
Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

041	0908_MW108D_250404	HDPE (no PTFE)	20 mL	00352309010914	Grey	No	
041	0908_MW108D_250404	HDPE (no PTFE)	20 mL	00350822025696	Grey	No	
041	0908_MW108D_250404	HDPE (no PTFE)	20 mL	00350822026054	Grey	No	
042	0908_MW108S_250404	HDPE (no PTFE)	20 mL	00352309010804	Grey	No	
042	0908_MW108S_250404	HDPE (no PTFE)	20 mL	00352407198406	Grey	No	
042	0908_MW108S_250404	HDPE (no PTFE)	20 mL	00352407198445	Grey	No	
042	0908_MW108S_250404	HDPE (no PTFE)	20 mL	00352309010746	Grey	No	
043	0908_MW109D_250404	HDPE (no PTFE)	20 mL	00352309050803	Grey	No	
043	0908_MW109D_250404	HDPE (no PTFE)	20 mL	00350822026066	Grey	No	
043	0908_MW109D_250404	HDPE (no PTFE)	20 mL	00350822025864	Grey	No	
043	0908_MW109D_250404	HDPE (no PTFE)	20 mL	00352309050829	Grey	No	
044	0908_MW175D_250404	HDPE (no PTFE)	20 mL	00352309010634	Grey	No	
044	0908_MW175D_250404	HDPE (no PTFE)	20 mL	00352407198378	Grey	No	
044	0908_MW175D_250404	HDPE (no PTFE)	20 mL	00352309010702	Grey	No	
044	0908_MW175D_250404	HDPE (no PTFE)	20 mL	00352407198209	Grey	No	
045	0908_MW466_250404	HDPE (no PTFE)	20 mL	00352407185855	Grey	No	
045	0908_MW466_250404	HDPE (no PTFE)	20 mL	00352407185769	Grey	No	
045	0908_MW466_250404	HDPE (no PTFE)	20 mL	00352407198303	Grey	No	
045	0908_MW466_250404	HDPE (no PTFE)	20 mL	00352407198331	Grey	No	
046	0908_MW468_250404	HDPE (no PTFE)	20 mL	00352309010791	Grey	No	
046	0908_MW468_250404	HDPE (no PTFE)	20 mL	00352309011097	Grey	No	
046	0908_MW468_250404	HDPE (no PTFE)	20 mL	00350822025928	Grey	No	
046	0908_MW468_250404	HDPE (no PTFE)	20 mL	00350822026006	Grey	No	
047	0908_MW886_250403	HDPE (no PTFE)	20 mL	00352407198408	Grey	No	
047	0908_MW886_250403	HDPE (no PTFE)	20 mL	00352407198186	Grey	No	
047	0908_MW886_250403	HDPE (no PTFE)	20 mL	00352407198290	Grey	No	
047	0908_MW886_250403	HDPE (no PTFE)	20 mL	00352407198245	Grey	No	



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

EMAIL REPORTS TO:

Biohazard info:

Other comments:

048	0908_MW172_250401	HDPE (no PTFE)	20 mL	00352312060399	Grey	No	
048	0908_MW172_250401	HDPE (no PTFE)	20 mL	00352312060224	Grey	No	
048	0908_MW172_250401	HDPE (no PTFE)	20 mL	00352312060244	Grey	No	
048	0908_MW172_250401	HDPE (no PTFE)	20 mL	00352312060466	Grey	No	
049	0908_MW171D_250404	HDPE (no PTFE)	20 mL	00352309010891	Grey	No	
049	0908_MW171D_250404	HDPE (no PTFE)	20 mL	00352407185934	Grey	No	
049	0908_MW171D_250404	HDPE (no PTFE)	20 mL	00352309010941	Grey	No	
049	0908_MW171D_250404	HDPE (no PTFE)	20 mL	00352407185752	Grey	No	
050	0908_MW202D_250401	HDPE (no PTFE)	20 mL	00352309010542	Grey	No	
050	0908_MW202D_250401	HDPE (no PTFE)	20 mL	00352309010695	Grey	No	
050	0908_MW202D_250401	HDPE (no PTFE)	20 mL	00352309010538	Grey	No	
050	0908_MW202D_250401	HDPE (no PTFE)	20 mL	00352309011042	Grey	No	
051	0908_MW202S_250401	HDPE (no PTFE)	20 mL	00352312060196	Grey	No	
051	0908_MW202S_250401	HDPE (no PTFE)	20 mL	00352312060346	Grey	No	
051	0908_MW202S_250401	HDPE (no PTFE)	20 mL	00352309010837	Grey	No	
051	0908_MW202S_250401	HDPE (no PTFE)	20 mL	00352309010749	Grey	No	
052	0908_MW171S_250404	HDPE (no PTFE)	20 mL	00352407185949	Grey	No	
052	0908_MW171S_250404	HDPE (no PTFE)	20 mL	00352407185956	Grey	No	
052	0908_MW171S_250404	HDPE (no PTFE)	20 mL	00352407186007	Grey	No	
052	0908_MW171S_250404	HDPE (no PTFE)	20 mL	00352407185873	Grey	No	
053	0908_MW179D_250401	HDPE (no PTFE)	20 mL	00350522049604	Grey	No	
053	0908_MW179D_250401	HDPE (no PTFE)	20 mL	00350522049673	Grey	No	
053	0908_MW179D_250401	HDPE (no PTFE)	20 mL	00350822026858	Grey	No	
053	0908_MW179D_250401	HDPE (no PTFE)	20 mL	00350822026741	Grey	No	
054	0908_MW179S_250401	HDPE (no PTFE)	20 mL	00352309010874	Grey	No	
054	0908_MW179S_250401	HDPE (no PTFE)	20 mL	00352309010511	Grey	No	
054	0908_MW179S_250401	HDPE (no PTFE)	20 mL	00352309010752	Grey	No	



CHAIN OF CUSTODY

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

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CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFSOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info.

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / Frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: -C

Other comments:

EMAIL REPORTS TO:

054	0908_MW179S_250401	HDPE (no PTFE)	20 mL	00352309010783	Grey	No	
055	0908_MW304_250404	HDPE (no PTFE)	20 mL	00352407185911	Grey	No	
055	0908_MW304_250404	HDPE (no PTFE)	20 mL	00352407185992	Grey	No	
055	0908_MW304_250404	HDPE (no PTFE)	20 mL	00352407185844	Grey	No	
055	0908_MW304_250404	HDPE (no PTFE)	20 mL	00352407185964	Grey	No	
056	0908_MW155_250404	HDPE (no PTFE)	20 mL	00352407198300	Grey	No	
056	0908_MW155_250404	HDPE (no PTFE)	20 mL	00352407185817	Grey	No	
056	0908_MW155_250404	HDPE (no PTFE)	20 mL	00352407185796	Grey	No	
056	0908_MW155_250404	HDPE (no PTFE)	20 mL	00352407198349	Grey	No	
057	0908_MW406_250403	HDPE (no PTFE)	20 mL	00352407198358	Grey	No	
057	0908_MW406_250403	HDPE (no PTFE)	20 mL	00352407198331	Grey	No	
057	0908_MW406_250403	HDPE (no PTFE)	20 mL	00352407198328	Grey	No	
057	0908_MW406_250403	HDPE (no PTFE)	20 mL	00352407198259	Grey	No	
058	0908_MW441_250404	HDPE (no PTFE)	20 mL	00352309051068	Grey	No	
058	0908_MW441_250404	HDPE (no PTFE)	20 mL	00352407185896	Grey	No	
058	0908_MW441_250404	HDPE (no PTFE)	20 mL	00352407185913	Grey	No	
058	0908_MW441_250404	HDPE (no PTFE)	20 mL	00352309050748	Grey	No	
059	0908_MW208_250404	HDPE (no PTFE)	20 mL	00352407185929	Grey	No	
059	0908_MW208_250404	HDPE (no PTFE)	20 mL	00350822025733	Grey	No	
059	0908_MW208_250404	HDPE (no PTFE)	20 mL	00352407185868	Grey	No	
059	0908_MW208_250404	HDPE (no PTFE)	20 mL	00350822025547	Grey	No	
060	0908_MW210D_250404	HDPE (no PTFE)	20 mL	00352407186039	Grey	No	
060	0908_MW210D_250404	HDPE (no PTFE)	20 mL	00352407185781	Grey	No	
060	0908_MW210D_250404	HDPE (no PTFE)	20 mL	00352407185766	Grey	No	
060	0908_MW210D_250404	HDPE (no PTFE)	20 mL	00352407185986	Grey	No	
061	0908_MW210S_250404	HDPE (no PTFE)	20 mL	00352407185983	Grey	No	
061	0908_MW210S_250404	HDPE (no PTFE)	20 mL	00352407185901	Grey	No	

**CHAIN OF CUSTODY**

COC#: 80524

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

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CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFSOMP_25

SITE: WLM SW and GW

ORDER NO: 60739111_1.12

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001

2

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info.

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: °C

Other comments:

061	0908_MW210S_250404	HDPE (no PTFE)	20 mL	00352407185771	Grey	No	
061	0908_MW210S_250404	HDPE (no PTFE)	20 mL	00352407185773	Grey	No	
062	0908_SW059_250402	HDPE (no PTFE)	20 mL	00350822025560	Grey	No	
062	0908_SW059_250402	HDPE (no PTFE)	20 mL	00352309010900	Grey	No	
062	0908_SW059_250402	HDPE (no PTFE)	20 mL	00350822025587	Grey	No	
062	0908_SW059_250402	HDPE (no PTFE)	20 mL	00352309010979	Grey	No	
063	0908_SW047_250402	HDPE (no PTFE)	20 mL	00350821014017	Grey	No	
063	0908_SW047_250402	HDPE (no PTFE)	20 mL	00352309010824	Grey	No	
063	0908_SW047_250402	HDPE (no PTFE)	20 mL	00352309010800	Grey	No	
063	0908_SW047_250402	HDPE (no PTFE)	20 mL	00350821014138	Grey	No	
064	0908_SW055_250402	HDPE (no PTFE)	20 mL	00352309010578	Grey	No	
064	0908_SW055_250402	HDPE (no PTFE)	20 mL	00350522049560	Grey	No	
064	0908_SW055_250402	HDPE (no PTFE)	20 mL	00350522049880	Grey	No	
064	0908_SW055_250402	HDPE (no PTFE)	20 mL	00352309010591	Grey	No	
065	0908_SW108_250402	HDPE (no PTFE)	20 mL	00352309010796	Grey	No	
065	0908_SW108_250402	HDPE (no PTFE)	20 mL	00352309010583	Grey	No	
065	0908_SW108_250402	HDPE (no PTFE)	20 mL	00352309010885	Grey	No	
065	0908_SW108_250402	HDPE (no PTFE)	20 mL	00352309010712	Grey	No	
066	0908_SW110_250402	HDPE (no PTFE)	20 mL	00352309010570	Grey	No	
066	0908_SW110_250402	HDPE (no PTFE)	20 mL	00352309010832	Grey	No	
066	0908_SW110_250402	HDPE (no PTFE)	20 mL	00352312060320	Grey	No	
066	0908_SW110_250402	HDPE (no PTFE)	20 mL	00352312060465	Grey	No	
067	0908_SW079_250402	HDPE (no PTFE)	20 mL	00352101040694	Grey	No	
067	0908_SW079_250402	HDPE (no PTFE)	20 mL	00352101040558	Grey	No	
067	0908_SW079_250402	HDPE (no PTFE)	20 mL	00352309010815	Grey	No	
067	0908_SW079_250402	HDPE (no PTFE)	20 mL	00352309010669	Grey	No	
068	0908_SW048_250402	HDPE (no PTFE)	20 mL	00352309010996	Grey	No	

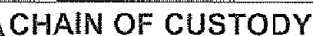


ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

075	0908_SW062_250402	HDPE (no PTFE)	20 mL	00352309010908	Grey	No	
075	0908_SW062_250402	HDPE (no PTFE)	20 mL	00352309010903	Grey	No	
075	0908_SW062_250402	HDPE (no PTFE)	20 mL	00352309010806	Grey	No	
075	0908_SW062_250402	HDPE (no PTFE)	20 mL	00352309010507	Grey	No	
076	0908_SW081_250402	HDPE (no PTFE)	20 mL	00352309011051	Grey	No	
076	0908_SW081_250402	HDPE (no PTFE)	20 mL	00350522049557	Grey	No	
076	0908_SW081_250402	HDPE (no PTFE)	20 mL	00350522049916	Grey	No	
076	0908_SW081_250402	HDPE (no PTFE)	20 mL	00352309011070	Grey	No	
077	0908_SW005_250402	HDPE (no PTFE)	20 mL	00352101040798	Grey	No	
077	0908_SW005_250402	HDPE (no PTFE)	20 mL	00352101040758	Grey	No	
077	0908_SW005_250402	HDPE (no PTFE)	20 mL	00352101040414	Grey	No	
077	0908_SW005_250402	HDPE (no PTFE)	20 mL	00352101040727	Grey	No	
078	0908_SW014_250402	HDPE (no PTFE)	20 mL	00350822025941	Grey	No	
078	0908_SW014_250402	HDPE (no PTFE)	20 mL	00352309050122	Grey	No	
078	0908_SW014_250402	HDPE (no PTFE)	20 mL	00352309050074	Grey	No	
078	0908_SW014_250402	HDPE (no PTFE)	20 mL	00350822025585	Grey	No	
079	0908_SW023_250402	HDPE (no PTFE)	20 mL	00352309011028	Grey	No	
079	0908_SW023_250402	HDPE (no PTFE)	20 mL	00352309011021	Grey	No	
079	0908_SW023_250402	HDPE (no PTFE)	20 mL	00352309010930	Grey	No	
079	0908_SW023_250402	HDPE (no PTFE)	20 mL	00352309010847	Grey	No	
080	0908_SW024_250402	HDPE (no PTFE)	20 mL	00352309010950	Grey	No	
080	0908_SW024_250402	HDPE (no PTFE)	20 mL	00352309010909	Grey	No	
080	0908_SW024_250402	HDPE (no PTFE)	20 mL	00350522049434	Grey	No	
080	0908_SW024_250402	HDPE (no PTFE)	20 mL	00350522049702	Grey	No	
081	0908_QC100_250401	HDPE (no PTFE)	20 mL	00352309010801	Grey	No	
081	0908_QC100_250401	HDPE (no PTFE)	20 mL	00352407053236	Grey	No	
081	0908_QC100_250401	HDPE (no PTFE)	20 mL	00352309011045	Grey	No	



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:



CERTIFICATE OF ANALYSIS

Work Order : **ES2510538**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80539**
Sampler : **[REDACTED]**
Site : **Offsite 2**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **4**
No. of samples analysed : **4**

Page : **1 of 13**
Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **11-Apr-2025 13:10**
Date Analysis Commenced : **14-Apr-2025**
Issue Date : **17-Apr-2025 13:52**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW147D_25041 1	0908_MW147S_25041 1	----	----	----
Sampling date / time				11-Apr-2025 11:41	11-Apr-2025 11:45	----	----	----
Compound	CAS Number	LOR	Unit	ES2510538-003	ES2510538-004	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	<0.02	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	0.03	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW147D_25041 1	0908_MW147S_25041 1	----	----	----
Sampling date / time				11-Apr-2025 11:41	11-Apr-2025 11:45	----	----	----
Compound	CAS Number	LOR	Unit	ES2510538-003	ES2510538-004	-----	-----	-----
Result				Result	Result	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	0.03	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	<0.05	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW147D_25041 1	0908_MW147S_25041 1	----	----	----
Sampling date / time				11-Apr-2025 11:41	11-Apr-2025 11:45	----	----	----
Compound	CAS Number	LOR	Unit	ES2510538-003	ES2510538-004	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW147D_25041 1	0908_MW147S_25041 1	----	----	----
Sampling date / time				11-Apr-2025 11:41	11-Apr-2025 11:45	----	----	----
Compound	CAS Number	LOR	Unit	ES2510538-003	ES2510538-004	-----	-----	-----
Result				Result	Result	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS	----	0.01	µg/L	----	0.09	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	0.04	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	0.09	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	95.5	----	----	----	----
13C4-PFOS	----	0.02	%	----	105	----	----	----
13C8-PFOA	----	0.002	%	103	----	----	----	----
13C8-PFOA	----	0.02	%	----	112	----	----	----



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD600_250410

Sampling date / time

10-Apr-2025 13:15

Compound	CAS Number	LOR	Unit

ES2510538-001

Result

EA055: Moisture Content (Dried @ 105-110°C)

Moisture Content

0.1

%

33.1

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid
 (PFPrS)

423-41-6

0.0005

mg/kg

<0.0005

Perfluorobutane sulfonic acid
 (PFBS)

375-73-5

0.0002

mg/kg

<0.0002

Perfluoropentane sulfonic acid
 (PFPeS)

2706-91-4

0.0002

mg/kg

<0.0002

Perfluorohexane sulfonic acid
 (PFHxS)

355-46-4

0.0002

mg/kg

0.0014

Perfluoroheptane sulfonic acid
 (PFHpS)

375-92-8

0.0002

mg/kg

<0.0002

Perfluorooctane sulfonic acid
 (PFOS)

1763-23-1

0.0002

mg/kg

0.0083

Perfluorononane sulfonic acid
 (PFNS)

68259-12-1

0.0002

mg/kg

<0.0002

Perfluorodecane sulfonic acid
 (PFDS)

335-77-3

0.0002

mg/kg

<0.0002

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)

375-22-4

0.001

mg/kg

<0.001

Perfluoropentanoic acid (PFPeA)

2706-90-3

0.0002

mg/kg

<0.0002

Perfluorohexanoic acid (PFHxA)

307-24-4

0.0002

mg/kg

<0.0002

Perfluoroheptanoic acid (PFHpA)

375-85-9

0.0002

mg/kg

<0.0002

Perfluorooctanoic acid (PFOA)

335-67-1

0.0002

mg/kg

<0.0002

Perfluorononanoic acid (PFNA)

375-95-1

0.0002

mg/kg

<0.0002

Perfluorodecanoic acid (PFDA)

335-76-2

0.0002

mg/kg

<0.0002

Perfluoroundecanoic acid
 (PFUnDA)

2058-94-8

0.0002

mg/kg

<0.0002

Perfluorododecanoic acid
 (PFDoDA)

307-55-1

0.0002

mg/kg

<0.0002

Perfluorotridecanoic acid
 (PFTrDA)

72629-94-8

0.0002

mg/kg

<0.0002

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD600_250410				
Sampling date / time					10-Apr-2025 13:15				
Compound	CAS Number	LOR	Unit		ES2510538-001				
				Result					
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005				
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002				
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005				
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005				
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005				
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002				
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002				
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005				
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		0.0097				
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0097				
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0097				
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0908_SD600_250410	----	----	----	----
			Sampling date / time	10-Apr-2025 13:15	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2510538-001	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.0002	%	101	----	----	----	----
13C8-PFOA	----	0.0002	%	102	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW600_250410

Sampling date / time

10-Apr-2025 13:25

Compound

CAS Number

LOR

Unit

ES2510538-002

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.06	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.11	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.12	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.80	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.07	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.46	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.08	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.18	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.04	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.08	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW600_250410

Sampling date / time

10-Apr-2025 13:25

Compound

CAS Number

LOR

Unit

ES2510538-002

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

3.00

Sum of PFHxS and PFOS

355-46-4/1763-23-1

0.01

µg/L

2.26

Sum of PFAS (WA DER List)

0.01

µg/L

2.75

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0908_SW600_250410	----	----	----	----
			Sampling date / time	10-Apr-2025 13:25	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2510538-002	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	99.0	----	----	----	----
13C8-PFOA	----	0.02	%	120	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2510538	Page	: 1 of 14
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 11-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 14-Apr-2025
C-O-C number	: 80539	Issue Date	: 17-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 2		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 4		
No. of samples analysed	: 4		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6510908)									
ES2510532-002	Anonymous	EA055: Moisture Content	----	0.1	%	13.2	14.4	8.8	0% - 20%
ES2510540-002	Anonymous	EA055: Moisture Content	----	0.1	%	27.5	28.2	2.4	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6508442)									
ES2510538-001	0908_SD600_250410	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0021	38.5	0% - 50%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0083	0.0100	17.9	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6508442)									
ES2510538-001	0908_SD600_250410	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.0005	82.8	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.0003	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6508442) - continued									
ES2510538-001	0908_SD600_250410	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6508442)									
ES2510538-001	0908_SD600_250410	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6508442)									
ES2510538-001	0908_SD600_250410	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6508015)									
ES2510113-071	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2510286-003	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.63	0.61	3.7	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	4.28	4.28	0.0	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	0.03	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6508015) - continued									
ES2510286-003	Anonymous	EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.05	0.04	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6513120)									
ES2510538-003	0908_MW147D_250411	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6508015)									
ES2510113-071	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2510286-003	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.11	0.11	0.0	0% - 50%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.21	0.21	0.0	0% - 50%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6508015) - continued									
ES2510286-003	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6513120)									
ES2510538-003	0908_MW147D_250411	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6508015)									
ES2510113-071	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2510286-003	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6508015) - continued									
ES2510286-003	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6513120)									
ES2510538-003	0908_MW147D_250411	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6508015)									
ES2510113-071	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2510286-003	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	0.22	0.24	8.2	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6513120)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6513120) - continued									
ES2510538-003	0908_MW147D_250411	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6508015)									
ES2510113-071	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2510286-003	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	5.73	5.72	0.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6508442)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	106	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508442)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	100.0	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.4	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.6	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.6	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508442)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	111	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	109	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	114	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.5	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.4	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
						Concentration	LCS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6508442)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	87.1	62.0	145	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	102	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	115	65.0	137	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	120	69.2	143	

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
						Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6508015)									
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	111	70.0	130	
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	79.9	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	84.0	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	80.2	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	96.6	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	93.5	65.0	140	
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	92.8	70.0	130	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	97.1	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513120)									
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	97.7	70.0	130	
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	86.1	72.0	130	
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	95.9	71.0	127	
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	102	68.0	131	
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	98.2	69.0	134	
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	86.7	65.0	140	
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	63.2	53.0	142	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508015)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	86.8	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.6	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	72.3	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	79.8	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	109	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	86.3	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	89.4	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	126	72.0	134	



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508015) - continued								
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	111	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	117	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	101	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513120)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	86.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	89.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	90.4	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	89.9	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	92.0	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	88.8	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	90.6	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	91.8	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	91.5	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	68.9	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	105	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	104	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508015)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	82.9	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	117	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	89.0	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	90.4	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	86.1	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	84.1	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513120)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	98.6	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.5	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	94.9	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	86.2	72.3	128



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513120) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	101	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	81.7	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	82.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6508015)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	75.3	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	97.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	81.2	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	126	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513120)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	99.6	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	91.5	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	132	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	101	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6508442)							
ES2510538-001	0908_SD600_250410	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	110	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	89.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	97.2	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	116	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	98.2	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	102	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	106	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508442)							
ES2510538-001	0908_SD600_250410	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	97.8	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	98.3	69.0	132



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508442) - continued							
ES2510538-001	0908_SD600_250410	EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	86.4	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	109	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	92.8	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	93.0	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	108	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	123	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	104	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	118	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508442)							
ES2510538-001	0908_SD600_250410	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	98.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	110	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	112	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	102	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	86.0	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	87.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6508442)							
ES2510538-001	0908_SD600_250410	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	89.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	100	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	78.2	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	108	69.2	143

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6508015)							
ES2510113-072	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	111	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	80.2	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	97.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	90.1	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	96.3	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	85.2	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	106	70.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6508015) - continued							
ES2510113-072	Anonymous	EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	95.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513120)							
ES2510542-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	75.9	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	84.1	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	89.6	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	114	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	92.5	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.5	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	58.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508015)							
ES2510113-072	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	84.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	110	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	80.2	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	79.2	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	108	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	90.1	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	99.0	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	101	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	128	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	107	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	113	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	106	62.9	136
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513120)					
ES2510542-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	91.5	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	95.8	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	76.6	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	79.5	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	93.3	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	83.3	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	85.3	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	90.3	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	98.6	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	67.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	101	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	120	65.6	133
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508015)					
ES2510113-072	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	91.0	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508015) - continued							
ES2510113-072	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	124	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	88.4	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	90.6	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	105	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	85.8	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	82.6	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513120)							
ES2510542-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	87.2	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	93.9	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	78.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	99.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	73.9	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	80.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6508015)							
ES2510113-072	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	75.5	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	84.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	109	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	126	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513120)							
ES2510542-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	81.1	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	86.7	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	133	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	102	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2510538	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 11-Apr-2025
Site	: Offsite 2	Issue Date	: 17-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 4
Order number	: 60739111_1.10.1	No. of samples analysed	: 4

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2510538--001	0908_SD600_250410	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_SD600_250410	10-Apr-2025	----	----	----	15-Apr-2025	24-Apr-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_SD600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_SD600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_SD600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	24-May-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	07-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW147S_250411	11-Apr-2025	14-Apr-2025	08-Oct-2025	✓	16-Apr-2025	08-Oct-2025	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW147D_250411	11-Apr-2025	15-Apr-2025	08-Oct-2025	✓	17-Apr-2025	08-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_SW600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	07-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW147S_250411	11-Apr-2025	14-Apr-2025	08-Oct-2025	✓	16-Apr-2025	08-Oct-2025	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW147D_250411	11-Apr-2025	15-Apr-2025	08-Oct-2025	✓	17-Apr-2025	08-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_SW600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	07-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW147S_250411	11-Apr-2025	14-Apr-2025	08-Oct-2025	✓	16-Apr-2025	08-Oct-2025	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW147D_250411	11-Apr-2025	15-Apr-2025	08-Oct-2025	✓	17-Apr-2025	08-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	07-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW147S_250411	11-Apr-2025	14-Apr-2025	08-Oct-2025	✓	16-Apr-2025	08-Oct-2025	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW147D_250411	11-Apr-2025	15-Apr-2025	08-Oct-2025	✓	17-Apr-2025	08-Oct-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW600_250410	10-Apr-2025	14-Apr-2025	07-Oct-2025	✓	16-Apr-2025	07-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW147S_250411	11-Apr-2025	14-Apr-2025	08-Oct-2025	✓	16-Apr-2025	08-Oct-2025	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW147D_250411	11-Apr-2025	15-Apr-2025	08-Oct-2025	✓	17-Apr-2025	08-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	13	15.38	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	1	6	16.67	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	1	6	16.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2510538**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80539**
Site : **Offsite 2**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **11-Apr-2025 13:10**
Client Requested Due : **17-Apr-2025**
Date

Issue Date : **11-Apr-2025**
Scheduled Reporting Date : **17-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **----**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **2.0°C - Ice present**
No. of samples received / analysed : **4 / 4**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2510538-001	10-Apr-2025 13:15	0908_SD600_250410	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2510538-002	10-Apr-2025 13:25	0908_SW600_250410	✓	
ES2510538-003	11-Apr-2025 11:41	0908_MW147D_250411		✓
ES2510538-004	11-Apr-2025 11:45	0908_MW147S_250411	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

- [REDACTED]

Email

[REDACTED]

- [REDACTED]

Email

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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 80539 # Samples: 4 Sampler: [REDACTED]
Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

Special Instructions:

ALS Use Only

Custody seal intact?	YES ☒	NO ☐	N/A
Free ice / frozen ice bricks upon receipt?	YES ☒	NO ☐	N/A
Random sample temperature on receipt?	2.0 °C		

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>11/4/25</u> <u>1306</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>11/4</u> <u>13:10</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>1700</u> <u>11/04</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>19:30</u> <u>11/4</u>
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COC#: 88539

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW 0908 PFASOMP 25

SITE: Offsite 2

ORDER NO: 60739111_1.10.1

PROJECT MANAGERS

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

2 V3 / ES2024AECOMAU001

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

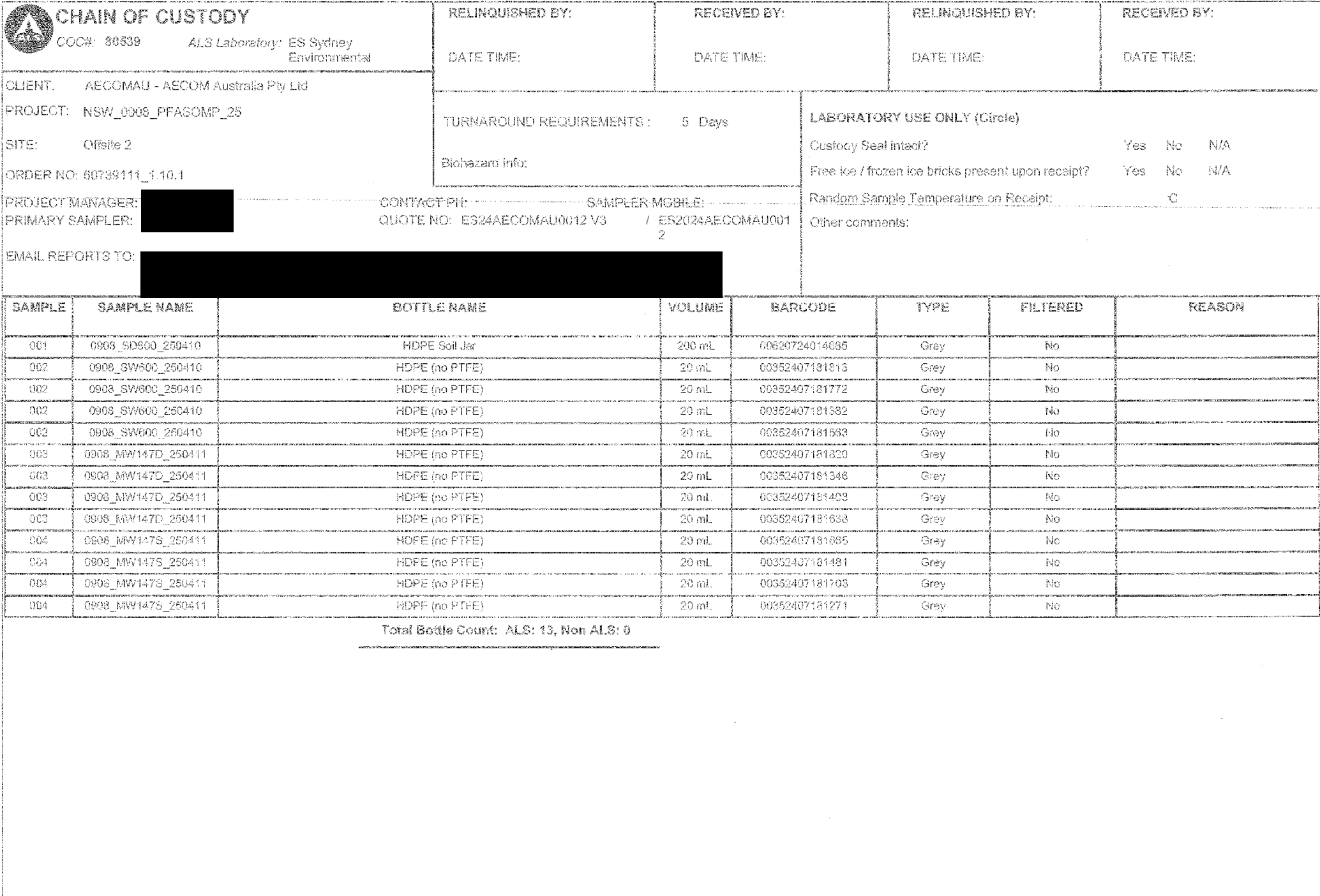
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Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	CN HOLD	Table 2 - PFAS Full Suite Soil	Table 7 - PFAS Full Suite Water	Table 8 - PFAS Full Suite LL Water	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SD800_250410		10/04/2025 01:15 PM	SOIL	ALS: 1 Non ALS: 0	No	X				
002	0908_SW800_250410		10/04/2025 01:25 PM	WATER	ALS: 4 Non ALS: 0	No		X			
003	0908_MW147D_250411		11/04/2025 11:41 AM	WATER	ALS: 4 Non ALS: 0	No			X		
004	0909_MW147S_250411		11/04/2025 11:43 AM	WATER	ALS: 4 Non ALS: 0	No		X			





CERTIFICATE OF ANALYSIS

Work Order : **ES2510539**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **81111**
Sampler : **[REDACTED]**
Site : **WLM SW and GW**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **54**
No. of samples analysed : **54**

Page : 1 of 38
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **11-Apr-2025 13:10**
Date Analysis Commenced : **14-Apr-2025**
Issue Date : **05-May-2025 12:40**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW159D_25041

0908_MW159S_25041

0908_MW318S_25041

0908_MW842_250410

0908_MW844_250410

Sampling date / time

10-Apr-2025 11:25

10-Apr-2025 11:31

10-Apr-2025 11:06

10-Apr-2025 09:29

10-Apr-2025 09:13

Compound	CAS Number	LOR	Unit	ES2510539-001	ES2510539-002	ES2510539-003	ES2510539-004	ES2510539-005
				Result	Result	Result	Result	Result

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.002	0.007	0.003	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	<0.002	0.027	0.002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	0.003	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	0.009	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW159D_25041 0	0908_MW159S_25041 0	0908_MW318S_25041 0	0908_MW842_250410	0908_MW844_250410
Sampling date / time				10-Apr-2025 11:25	10-Apr-2025 11:31	10-Apr-2025 11:06	10-Apr-2025 09:29	10-Apr-2025 09:13
Compound	CAS Number	LOR	Unit	ES2510539-001	ES2510539-002	ES2510539-003	ES2510539-004	ES2510539-005
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.002	0.004	0.007	0.042	0.002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.002	0.004	0.007	0.030	0.002
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.002	0.004	0.007	0.042	0.002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	107	99.7	102	102	105
13C8-PFOA	----	0.002	%	105	98.0	98.4	103	102

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW280S_25040

0908_MW315D_25040

0908_MW315S_25040

0908_MW107D_25040

0908_MW107S_25040

Sampling date / time

09-Apr-2025 16:12

09-Apr-2025 15:06

09-Apr-2025 15:10

09-Apr-2025 15:39

09-Apr-2025 15:57

Compound	CAS Number	LOR	Unit	ES2510539-006	ES2510539-007	ES2510539-008	ES2510539-009	ES2510539-010
				Result	Result	Result	Result	Result

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.026	<0.002	0.003	0.008
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.026	<0.002	<0.002	0.003
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.006	0.128	0.016	0.007	0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.002	<0.002	0.003
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.01	<0.01	<0.01	<0.01

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.007	<0.002	<0.002	0.003
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.050	0.003	0.006	0.017
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.003	<0.002	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW280S_25040 9	0908_MW315D_25040 9	0908_MW315S_25040 9	0908_MW107D_25040 9	0908_MW107S_25040 9
Sampling date / time				09-Apr-2025 16:12	09-Apr-2025 15:06	09-Apr-2025 15:10	09-Apr-2025 15:39	09-Apr-2025 15:57	
Compound	CAS Number	LOR	Unit	ES2510539-006	ES2510539-007	ES2510539-008	ES2510539-009	ES2510539-010	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.006	0.250	0.033	0.016	0.036	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.006	0.128	0.018	0.007	0.005	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.006	0.214	0.033	0.016	0.033	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	98.0	102	108	103	107	
13C8-PFOA	----	0.002	%	103	102	107	99.8	101	

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW241D_25040 9	0908_MW241S_25040 9	0908_MW316D_25040 9	0908_MW128D_25040 9	0908_MW128S_25040 9
Sampling date / time				09-Apr-2025 16:28	09-Apr-2025 16:22	09-Apr-2025 12:51	09-Apr-2025 13:07	09-Apr-2025 13:09	
Compound	CAS Number	LOR	Unit	ES2510539-011	ES2510539-012	ES2510539-013	ES2510539-014	ES2510539-015	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	0.038	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.011	<0.002	<0.002	0.004	<0.002	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW241D_25040 9	0908_MW241S_25040 9	0908_MW316D_25040 9	0908_MW128D_25040 9	0908_MW128S_25040 9
Sampling date / time				09-Apr-2025 16:28	09-Apr-2025 16:22	09-Apr-2025 12:51	09-Apr-2025 13:07	09-Apr-2025 13:09	
Compound	CAS Number	LOR	Unit	ES2510539-011	ES2510539-012	ES2510539-013	ES2510539-014	ES2510539-015	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.011	<0.002	<0.002	0.004	0.038	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.011	<0.002	<0.002	0.004	0.038	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.011	<0.002	<0.002	0.004	0.038	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	109	100.0	108	101	103	
13C8-PFOA	----	0.002	%	105	106	106	101	103	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908 MW163 250409

0908 MW264D 25041

0908 MW264S 25041

0908 MW130D 25041

0908 MW130S 25041

Sampling date / time

09-Apr-2025 12:41

10-Apr-2025 08:50

10-Apr-2025 08:55

10-Apr-2025 09:44

10-Apr-2025 09:49

				Sampling date/time	Test type: ES2510539-016	Test type: ES2510539-017	Test type: ES2510539-018	Test type: ES2510539-019	Test type: ES2510539-020
Compound	CAS Number	LOR	Unit		ES2510539-016	ES2510539-017	ES2510539-018	ES2510539-019	ES2510539-020
					Result	Result	Result	Result	Result

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.006	<0.002	0.006	0.009	0.003
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.008	0.006	<0.002	<0.002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW163_250409	0908_MW264D_250410	0908_MW264S_250410	0908_MW130D_250410	0908_MW130S_250410
Sampling date / time				09-Apr-2025 12:41	10-Apr-2025 08:50	10-Apr-2025 08:55	10-Apr-2025 09:44	10-Apr-2025 09:49	
Compound	CAS Number	LOR	Unit	ES2510539-016	ES2510539-017	ES2510539-018	ES2510539-019	ES2510539-020	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.006	0.008	0.012	0.009	0.003	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.006	0.008	0.012	0.009	0.003	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.006	0.008	0.012	0.009	0.003	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	106	106	108	99.7	111	
13C8-PFOA	----	0.002	%	103	108	95.9	100.0	108	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW160_250410	0908_MW318D_250410	0908_MW161D_250410	0908_MW161S_250410	0908_MW279S_250410
Sampling date / time					10-Apr-2025 10:47	10-Apr-2025 11:15	10-Apr-2025 12:39	10-Apr-2025 12:42	09-Apr-2025 12:11
Compound	CAS Number	LOR	Unit	ES2510539-021	ES2510539-022	ES2510539-023	ES2510539-024	ES2510539-025	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	0.03	<0.02	<0.02	0.04	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	0.06	<0.02	0.02	0.06	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.012	----	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	0.11	<0.02	0.04	0.10	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	0.96	0.21	0.55	1.29	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	0.05	<0.02	0.05	0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.008	----	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	0.27	0.67	2.01	0.33	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.01	----	----	----	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----	

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908 MW160 250410

0908 MW318D 25041

0908 MW161D 25041

0908 MW161S 25041

0908 MW279S 25040

Sampling date / time

10-Apr-2025 10:47

10-Apr-2025 11:15

10-Apr-2025 12:39

10-Apr-2025 12:42

09-Apr-2025 12:11

Compound

CAS Number

LOR

Unit

ES2510539-021

ES2510539-022

ES2510539-023

ES2510539-024

ES2510539-025

Result

Result

Result

Result

Result

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	0.03	<0.02	0.03	0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	0.21	0.04	0.10	0.27
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	0.05	0.01	0.05	0.02
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW160_250410	0908_MW318D_250410	0908_MW161D_250410	0908_MW161S_250410	0908_MW279S_250409
Sampling date / time					10-Apr-2025 10:47	10-Apr-2025 11:15	10-Apr-2025 12:39	10-Apr-2025 12:42	09-Apr-2025 12:11
Compound	CAS Number	LOR	Unit	ES2510539-021	ES2510539-022	ES2510539-023	ES2510539-024	ES2510539-025	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW160_250410	0908_MW318D_250410	0908_MW161D_250410	0908_MW161S_250410	0908_MW279S_250410
					0	0	0	0	9
Sampling date / time				10-Apr-2025 10:47	10-Apr-2025 11:15	10-Apr-2025 12:39	10-Apr-2025 12:42	09-Apr-2025 12:11	
Compound	CAS Number	LOR	Unit	ES2510539-021	ES2510539-022	ES2510539-023	ES2510539-024	ES2510539-025	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.030	----	----	----	----	
Sum of PFAS	----	0.01	µg/L	----	1.79	0.93	2.85	2.15	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.020	----	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	1.23	0.88	2.56	1.62	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.030	----	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	1.60	0.93	2.76	1.99	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	107	----	----	----	----	
13C4-PFOS	----	0.02	%	----	92.8	99.9	102	102	
13C8-PFOA	----	0.002	%	105	----	----	----	----	
13C8-PFOA	----	0.02	%	----	94.9	96.0	100	90.5	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW132D_25041 0	0908_MW132I_25041 0	0908_MW829_250407	0908_MW317D_25041 1	0908_MW134D_25041 1
Sampling date / time				10-Apr-2025 10:16	10-Apr-2025 10:26	07-Apr-2025 11:05	11-Apr-2025 09:48	11-Apr-2025 09:27	
Compound	CAS Number	LOR	Unit	ES2510539-026	ES2510539-027	ES2510539-028	ES2510539-029	ES2510539-030	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.24	0.03	0.01	<0.01	<0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.05	<0.02	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.89	0.18	0.02	<0.01	<0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	<0.02	<0.02	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW132D_25041 0	0908_MW132I_25041 0	0908_MW829_250407	0908_MW317D_25041 1	0908_MW134D_25041 1
Sampling date / time					10-Apr-2025 10:16	10-Apr-2025 10:26	07-Apr-2025 11:05	11-Apr-2025 09:48	11-Apr-2025 09:27
Compound	CAS Number	LOR	Unit	ES2510539-026	ES2510539-027	ES2510539-028	ES2510539-029	ES2510539-030	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%	100	104	94.8	99.3	99.4	
13C8-PFOA	----	0.02	%	96.8	99.7	98.5	98.0	97.7	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW134I_25041 1	0908_MW196_250411	0908_MW198_250411	0908_MW200_250411	0908_MW201D_25041 1
Sampling date / time				11-Apr-2025 09:33	11-Apr-2025 08:37	11-Apr-2025 08:46	11-Apr-2025 08:26	11-Apr-2025 08:16
Compound	CAS Number	LOR	Unit	ES2510539-031	ES2510539-032	ES2510539-033	ES2510539-034	ES2510539-035
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.03	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.12	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.05	0.34	2.11	0.08	<0.01
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.04	0.09	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	3.89	1.60	0.29	0.01
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.04	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.03	0.17	0.03	<0.02
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.03	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.03	0.07	<0.01	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0908_MW134I_250411 1	0908_MW196_250411	0908_MW198_250411	0908_MW200_250411	0908_MW201D_250411 1
Sampling date / time				11-Apr-2025 09:33	11-Apr-2025 08:37	11-Apr-2025 08:46	11-Apr-2025 08:26	11-Apr-2025 08:16
Compound	CAS Number	LOR	Unit	ES2510539-031	ES2510539-032	ES2510539-033	ES2510539-034	ES2510539-035
				Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued								
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.01	µg/L	0.05	4.35	4.26	0.40	0.01
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.05	4.23	3.71	0.37	0.01
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.05	4.29	4.05	0.40	0.01
EP231S: PFAS Surrogate								



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW134I_25041 1	0908_MW196_250411	0908_MW198_250411	0908_MW200_250411	0908_MW201D_25041 1
Sampling date / time					11-Apr-2025 09:33	11-Apr-2025 08:37	11-Apr-2025 08:46	11-Apr-2025 08:26	11-Apr-2025 08:16
Compound	CAS Number	LOR	Unit		ES2510539-031	ES2510539-032	ES2510539-033	ES2510539-034	ES2510539-035
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		104	94.9	92.8	105	103
13C8-PFOA	----	0.02	%		100	96.2	101	100	99.4



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW201S_25041 1	0908_MW317S_25041 1	0908_MW245D_25041 1	0908_MW245S_25041 1	0908_QC108_250407
Sampling date / time				11-Apr-2025 08:11	11-Apr-2025 09:41	11-Apr-2025 10:00	11-Apr-2025 09:58	07-Apr-2025 11:05	
Compound	CAS Number	LOR	Unit	ES2510539-036	ES2510539-037	ES2510539-038	ES2510539-039	ES2510539-041	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.03	<0.02	<0.02	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.49	0.02	<0.01	<0.01	0.02	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.05	<0.02	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.80	0.02	<0.01	0.02	0.02	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.05	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.07	<0.02	<0.02	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.05	<0.01	<0.01	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0908_MW201S_25041 1	0908_MW317S_25041 1	0908_MW245D_25041 1	0908_MW245S_25041 1	0908_QC108_250407
Sampling date / time				11-Apr-2025 08:11	11-Apr-2025 09:41	11-Apr-2025 10:00	11-Apr-2025 09:58	07-Apr-2025 11:05
Compound	CAS Number	LOR	Unit	ES2510539-036	ES2510539-037	ES2510539-038	ES2510539-039	ES2510539-041
				Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	107	98.9	104	98.3	93.2
13C8-PFOA	----	0.02	%	97.9	99.5	94.5	97.5	101



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_QC111_250409	0908_QC112_250409	0908_QC113_250410	0908_QC114_250410	0908_QC115_250410
Sampling date / time				09-Apr-2025 12:41	09-Apr-2025 16:22	10-Apr-2025 08:50	10-Apr-2025 10:16	10-Apr-2025 12:39
Compound	CAS Number	LOR	Unit	ES2510539-043	ES2510539-045	ES2510539-046	ES2510539-047	ES2510539-048
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.006	<0.002	<0.002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	----	0.22	0.18
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	----	0.04	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.002	0.005	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	----	0.78	0.46
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	----	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	----	<0.02	<0.02

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

0908_QC111_250409	0908_QC112_250409	0908_QC113_250410	0908_QC114_250410	0908_QC115_250410
09-Apr-2025 12:41	09-Apr-2025 16:22	10-Apr-2025 08:50	10-Apr-2025 10:16	10-Apr-2025 12:39
ES2510539-043	ES2510539-045	ES2510539-046	ES2510539-047	ES2510539-048
Result	Result	Result	Result	Result

Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	----	0.02	0.03
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	----	0.01	0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	----	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	----	<0.05	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	----	----	<0.05	<0.05

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_QC111_250409	0908_QC112_250409	0908_QC113_250410	0908_QC114_250410	0908_QC115_250410
Sampling date / time					09-Apr-2025 12:41	09-Apr-2025 16:22	10-Apr-2025 08:50	10-Apr-2025 10:16	10-Apr-2025 12:39
Compound	CAS Number	LOR	Unit	ES2510539-043	ES2510539-045	ES2510539-046	ES2510539-047	ES2510539-048	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	----	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	----	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	----	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_QC111_250409	0908_QC112_250409	0908_QC113_250410	0908_QC114_250410	0908_QC115_250410
Sampling date / time				09-Apr-2025 12:41	09-Apr-2025 16:22	10-Apr-2025 08:50	10-Apr-2025 10:16	10-Apr-2025 12:39
Compound	CAS Number	LOR	Unit	ES2510539-043	ES2510539-045	ES2510539-046	ES2510539-047	ES2510539-048
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	----	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	----	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	----	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	----	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.006	0.002	0.005	----	----
Sum of PFAS	----	0.01	µg/L	----	----	----	1.07	0.68
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.006	0.002	0.005	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	----	1.00	0.64
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.006	0.002	0.005	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	----	1.03	0.68
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	97.2	97.3	93.4	----	----
13C4-PFOS	----	0.02	%	----	----	----	96.7	94.2
13C8-PFOA	----	0.002	%	91.6	87.8	91.0	----	----
13C8-PFOA	----	0.02	%	----	----	----	101	102



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_QC116_250411	0908_MW731D_25040 9	0908_MW731S_25040 9	----	----
Sampling date / time				11-Apr-2025 09:27	09-Apr-2025 14:07	09-Apr-2025 14:13	----	----
Compound	CAS Number	LOR	Unit	ES2510539-049	ES2510539-051	ES2510539-052	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.47	0.09	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.86	0.34	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.60	0.31	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	6.27	3.57	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.92	0.28	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	18.8	10.8	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.06	0.10	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	0.2	0.2	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.23	0.27	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	1.30	1.05	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.20	0.15	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.56	0.40	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.05	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_QC116_250411	0908_MW731D_25040 9	0908_MW731S_25040 9	----	----
Sampling date / time					11-Apr-2025 09:27	09-Apr-2025 14:07	09-Apr-2025 14:13	----	----
Compound	CAS Number	LOR	Unit	ES2510539-049	ES2510539-051	ES2510539-052	-----	-----	
				Result	Result	Result	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	<0.01	30.5	17.6	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	<0.01	25.1	14.4	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	<0.01	28.4	16.8	----	----	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_QC116_250411	0908_MW731D_25040 9	0908_MW731S_25040 9	----	----
Sampling date / time					11-Apr-2025 09:27	09-Apr-2025 14:07	09-Apr-2025 14:13	----	----
Compound	CAS Number	LOR	Unit		ES2510539-049	ES2510539-051	ES2510539-052	-----	-----
					Result	Result	Result	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		95.0	97.3	94.9	----	----
13C8-PFOA	----	0.02	%		101	107	103	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC305_250409	0908_QC304_250407	0908_QC306_250410	0908_QC307_250411	----
Sampling date / time				09-Apr-2025 17:37	07-Apr-2025 17:30	10-Apr-2025 14:14	11-Apr-2025 12:28	----
Compound	CAS Number	LOR	Unit	ES2510539-044	ES2510539-050	ES2510539-053	ES2510539-054	-----
				Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	<0.02	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	<0.01	<0.01	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	<0.01	<0.01	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	<0.02	----	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC305_250409	0908_QC304_250407	0908_QC306_250410	0908_QC307_250411	----
Sampling date / time				09-Apr-2025 17:37	07-Apr-2025 17:30	10-Apr-2025 14:14	11-Apr-2025 12:28	----
Compound	CAS Number	LOR	Unit	ES2510539-044	ES2510539-050	ES2510539-053	ES2510539-054	-----
				Result	Result	Result	Result	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	<0.005	<0.005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	<0.005	<0.005	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	<0.05	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC305_250409	0908_QC304_250407	0908_QC306_250410	0908_QC307_250411	----
Sampling date / time				09-Apr-2025 17:37	07-Apr-2025 17:30	10-Apr-2025 14:14	11-Apr-2025 12:28	----
Compound	CAS Number	LOR	Unit	ES2510539-044	ES2510539-050	ES2510539-053	ES2510539-054	-----
				Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	<0.005	<0.005	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	<0.005	<0.005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	<0.005	<0.005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	<0.005	<0.005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	<0.002	<0.002	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	<0.002	<0.002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	<0.005	<0.005	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC305_250409	0908_QC304_250407	0908_QC306_250410	0908_QC307_250411	----
Sampling date / time				09-Apr-2025 17:37	07-Apr-2025 17:30	10-Apr-2025 14:14	11-Apr-2025 12:28	----
Compound	CAS Number	LOR	Unit	ES2510539-044	ES2510539-050	ES2510539-053	ES2510539-054	-----
				Result	Result	Result	Result	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	<0.005	<0.005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	<0.005	<0.005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	<0.005	<0.005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Sum of PFAS	----	0.01	µg/L	----	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	<0.002	<0.002	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	<0.01	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	98.4	----	90.8	98.7	----
13C4-PFOS	----	0.02	%	----	103	----	----	----
13C8-PFOA	----	0.002	%	94.6	----	96.8	104	----
13C8-PFOA	----	0.02	%	----	105	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

				0908_SW011_250407	0908_QC110_250407	----	----	----
Sampling date / time				07-Apr-2025 14:41	07-Apr-2025 14:41	----	----	----
Compound	CAS Number	LOR	Unit	ES2510539-040	ES2510539-042	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.03	0.02	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.42	0.43	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.04	0.04	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.84	1.74	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.08	0.07	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW011_250407	0908_QC110_250407	----	----	----
Sampling date / time				07-Apr-2025 14:41	07-Apr-2025 14:41	----	----	----	
Compound	CAS Number	LOR	Unit	ES2510539-040	ES2510539-042	-----	-----	-----	
				Result	Result	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	2.46	2.35	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	2.26	2.17	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	2.39	2.29	----	----	----	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW011_250407	0908_QC110_250407	----	----	----
Sampling date / time					07-Apr-2025 14:41	07-Apr-2025 14:41	----	----	----
Compound	CAS Number	LOR	Unit		ES2510539-040	ES2510539-042	-----	-----	-----
					Result	Result	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		102	99.8	----	----	----
13C8-PFOA	----	0.02	%		99.2	102	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: RINSATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2510539	Page	: 1 of 26
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 11-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 14-Apr-2025
C-O-C number	: 81111	Issue Date	: 05-May-2025
Sampler	: [REDACTED]		
Site	: WLM SW and GW		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 54		
No. of samples analysed	: 54		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6513123)									
ES2510539-001	0908_MW159D_250410	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6513493)									
ES2510539-011	0908_MW241D_250409	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.011	0.010	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6513493) - continued									
ES2510539-011	0908_MW241D_250409	EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2510539-021	0908_MW160_250410	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.012	0.013	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.008	0.005	35.4	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6515787)									
ES2510539-024	0908_MW161S_250410	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.55	0.56	1.9	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	2.01	1.89	6.1	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.05	0.06	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2510539-032	0908_MW196_250411	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.34	0.33	3.3	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	3.89	3.91	0.5	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6516536)									
ES2510539-043	0908_QC111_250409	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6516536) - continued									
ES2510539-043	0908_QC111_250409	EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.006	0.005	19.7	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6517061)									
ES2510539-041	0908_QC108_250407	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2510539-052	0908_MW731S_250409	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	3.57	3.57	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	10.8	9.87	8.9	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.09	0.10	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.34	0.35	3.3	0% - 50%
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.31	0.29	5.9	0% - 50%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.28	0.29	0.0	0% - 50%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6518739)									
ES2510539-054	0908_QC307_250411	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6518739) - continued									
ES2510539-054	0908_QC307_250411	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6513123)									
ES2510539-001	0908_MW159D_250410	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6513493)									
ES2510539-011	0908_MW241D_250409	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2510539-021	0908_MW160_250410	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6513493) - continued									
ES2510539-021	0908_MW160_250410	EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.01	0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6515787)									
ES2510539-024	0908_MW161S_250410	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.05	0.04	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.10	0.10	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2510539-032	0908_MW196_250411	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6516536)									
ES2510539-043	0908_QC111_250409	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6516536) - continued									
ES2510539-043	0908_QC111_250409	EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6517061)									
ES2510539-041	0908_QC108_250407	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2510539-052	0908_MW731S_250409	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.40	0.40	0.0	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.27	0.27	0.0	0% - 50%
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.05	1.05	0.0	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.15	0.16	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.2	0.2	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6518739)									
ES2510539-054	0908_QC307_250411	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6518739) - continued									
ES2510539-054	0908_QC307_250411	EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6513123)									
ES2510539-001	0908_MW159D_250410	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6513493)									
ES2510539-011	0908_MW241D_250409	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit

EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6516536)

EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6518739)

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6518739) - continued									
ES2510539-054	0908_QC307_250411	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6513123)									
ES2510539-001	0908_MW159D_250410	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6513493)									
ES2510539-011	0908_MW241D_250409	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2510539-021	0908_MW160_250410	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6515787)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6515787) - continued									
ES2510539-024	0908_MW161S_250410	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2510539-032	0908_MW196_250411	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6516536)									
ES2510539-043	0908_QC111_250409	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6517061)									
ES2510539-041	0908_QC108_250407	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2510539-052	0908_MW731S_250409	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit

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 Work Order : ES2510539
 Client : AECOM AUSTRALIA PTY LTD
 Project : NSW_0908_PFASOMP_25



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6517061) - continued									
ES2510539-052	0908_MW731S_250409	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6518739)									
ES2510539-054	0908_QC307_250411	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6515787)									
ES2510539-024	0908_MW161S_250410	EP231X: Sum of PFAS	----	0.01	µg/L	2.85	2.76	3.2	0% - 20%
ES2510539-032	0908_MW196_250411	EP231X: Sum of PFAS	----	0.01	µg/L	4.35	4.36	0.2	0% - 20%
EP231P: PFAS Sums (QC Lot: 6517061)									
ES2510539-041	0908_QC108_250407	EP231X: Sum of PFAS	----	0.01	µg/L	0.04	0.04	0.0	No Limit
ES2510539-052	0908_MW731S_250409	EP231X: Sum of PFAS	----	0.01	µg/L	17.6	16.7	5.3	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513123)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	103	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	98.0	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	92.4	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	84.4	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	108	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	96.7	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	84.3	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513493)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	114	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	101	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	91.6	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	112	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	102	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	107	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6515787)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	101	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	88.5	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	113	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	89.7	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	110	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	97.3	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	102	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6516536)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	95.1	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	79.4	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	99.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	80.2	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	106	69.0	134



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6516536) - continued								
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	86.2	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	78.6	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6517061)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	114	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	89.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	85.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	85.8	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	106	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	92.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	91.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	84.5	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6518739)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	103	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	89.0	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	90.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	101	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	114	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	101	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	68.3	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513123)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	103	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	102	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	88.0	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	110	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	89.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	107	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	111	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	93.9	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	93.3	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	124	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	106	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	101	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513493)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	109	73.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513493) - continued								
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	110	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	98.0	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	118	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	109	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	99.2	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDODA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	90.2	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	125	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	125	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	119	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6515787)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	96.3	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	91.5	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	92.3	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	103	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	98.7	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	78.8	69.0	133
EP231X: Perfluorododecanoic acid (PFDODA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	77.0	72.0	134
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	74.3	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	105	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	102	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6516536)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	93.1	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	84.7	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	87.7	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	110	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.9	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	101	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	97.7	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	81.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDODA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	125	72.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6516536) - continued								
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	98.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	99.5	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	101	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6517061)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	88.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	87.7	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	90.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	83.7	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	82.7	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	80.1	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	82.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	83.4	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	134
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	81.1	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	102	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	91.6	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6518739)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	96.1	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	92.9	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	93.0	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	106	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	94.2	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	96.2	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	95.9	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	107	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	87.2	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	119	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	118	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513123)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	96.6	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	106	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	94.4	61.1	139



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513123) - continued								
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	103	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	100	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.7	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	92.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513493)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.8	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	122	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	114	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	112	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	113	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	97.9	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6515787)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	93.4	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	105	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	90.9	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	99.5	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	99.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	85.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6516536)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	89.6	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	113	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	84.5	61.1	139



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6516536) - continued								
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	93.8	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	94.9	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	104	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	87.1	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6517061)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	85.9	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	98.6	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	82.8	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	84.8	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	87.8	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	86.2	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	80.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6518739)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	126	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	91.5	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	106	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	109	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	98.0	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	96.7	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513123)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	90.4	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	89.2	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	76.5	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	75.3	75.2	137



Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513493)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	101	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	114	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.6	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	86.7	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6515787)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	105	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	74.5	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	73.9	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	96.0	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6516536)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	80.1	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	79.0	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	104	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	113	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6517061)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	83.4	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	92.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	84.3	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	82.9	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6518739)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	89.4	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	114	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	122	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	131	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
Laboratory sample ID	Sample ID	Method: Compound	CAS Number				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513123)							
ES2510539-002	0908_MW159S_250410	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	106	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	101	72.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513123) - continued							
ES2510539-002	0908_MW159S_250410	EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	90.8	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	88.0	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	116	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	82.8	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513493)							
ES2510539-013	0908_MW316D_250409	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	115	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	106	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	95.0	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	79.2	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	121	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	106	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	77.8	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6515787)							
ES2510539-023	0908_MW161D_250410	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	111	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	97.3	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	116	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	82.7	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	117	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	81.0	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	120	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	104	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6516536)							
ES2510539-044	0908_QC305_250409	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	91.9	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	81.7	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	95.0	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	82.1	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	111	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.7	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	79.2	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6517061)							
ES2510539-042	0908_QC110_250407	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	97.5	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	77.9	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	74.2	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	79.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	97.3	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	# Not Determined	65.0	140



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6517061) - continued							
ES2510539-042	0908_QC110_250407	EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	87.3	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	80.1	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513123)							
ES2510539-002	0908_MW159S_250410	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	101	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	114	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	102	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	110	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	92.7	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	112	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	115	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	89.5	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	76.4	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	117	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	103	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	102	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513493)							
ES2510539-013	0908_MW316D_250409	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	97.6	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	106	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	101	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	118	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	96.3	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	114	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	118	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	103	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	77.1	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	90.0	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	124	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	87.4	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6515787)							
ES2510539-023	0908_MW161D_250410	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	103	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	92.7	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	112	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	93.4	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	114	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	106	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	96.1	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	88.0	72.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6515787) - continued							
ES2510539-023	0908_MW161D_250410	EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	81.8	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	113	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	106	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6516536)							
ES2510539-044	0908_QC305_250409	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	93.3	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	89.0	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	83.2	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	107	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	83.1	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	106	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	97.2	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	81.8	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	120	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	97.1	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	93.6	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	101	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6517061)							
ES2510539-042	0908_QC110_250407	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	82.9	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	89.5	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	86.5	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	82.5	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	82.2	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	80.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	86.3	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	79.9	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	102	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	80.5	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	104	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	93.2	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513123)							
ES2510539-002	0908_MW159S_250410	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	104	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	121	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	106	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	90.7	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	106	63.2	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513123) - continued							
ES2510539-002	0908_MW159S_250410	EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	111	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	96.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513493)							
ES2510539-013	0908_MW316D_250409	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	106	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	127	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	128	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	108	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	111	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	115	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	102	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6515787)							
ES2510539-023	0908_MW161D_250410	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	96.9	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	106	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	103	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	109	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	111	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	112	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	116	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6516536)							
ES2510539-044	0908_QC305_250409	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	88.2	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	99.5	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	95.1	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	84.7	72.3	128



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6516536) - continued							
ES2510539-044	0908_QC305_250409	EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	91.6	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	94.0	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	84.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6517061)							
ES2510539-042	0908_QC110_250407	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	93.9	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	96.9	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	90.0	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	84.1	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	94.6	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	82.2	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	86.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513123)							
ES2510539-002	0908_MW159S_250410	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	82.9	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	82.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	82.6	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	78.6	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513493)							
ES2510539-013	0908_MW316D_250409	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	76.3	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	86.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	79.0	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	84.8	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6515787)							
ES2510539-023	0908_MW161D_250410	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	106	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	75.5	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	90.3	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	124	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6516536)							
ES2510539-044	0908_QC305_250409	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	81.8	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	90.3	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	105	67.0	138



Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
Laboratory sample ID	Sample ID	Method: Compound	CAS Number				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6516536) - continued							
ES2510539-044	0908_QC305_250409	EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	124	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6517061)							
ES2510539-042	0908_QC110_250407	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	89.9	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	97.6	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.7	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	83.7	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2510539	Page	: 1 of 9
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 11-Apr-2025
Site	: WLM SW and GW	Issue Date	: 05-May-2025
Sampler	: [REDACTED]	No. of samples received	: 54
Order number	: 60739111_1.10.1	No. of samples analysed	: 54

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2510539--042	0908_QC110_250407	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_MW829_250407,	0908_SW011_250407	07-Apr-2025	16-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC108_250407, 0908_QC304_250407	0908_QC110_250407,	07-Apr-2025	17-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW280S_250409, 0908_MW315S_250409, 0908_MW107S_250409	0908_MW315D_250409, 0908_MW107D_250409,	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW241D_250409, 0908_MW316D_250409, 0908_MW128S_250409, 0908_MW279S_250409, 0908_QC305_250409,	0908_MW241S_250409, 0908_MW128D_250409, 0908_MW163_250409, 0908_QC111_250409, 0908_QC112_250409	09-Apr-2025	16-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW731D_250409,	0908_MW731S_250409	09-Apr-2025	17-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW159D_250410, 0908_MW318S_250410, 0908_MW844_250410	0908_MW159S_250410, 0908_MW842_250410,	10-Apr-2025	15-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL)								



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
0908_MW264D_250410, 0908_MW130D_250410, 0908_MW160_250410, 0908_MW161D_250410, 0908_MW132D_250410, 0908_QC113_250410,	0908_MW264S_250410, 0908_MW130S_250410, 0908_MW318D_250410, 0908_MW161S_250410, 0908_MW132I_250410, 0908_QC306_250410	10-Apr-2025	16-Apr-2025	07-Oct-2025	✓	22-Apr-2025	07-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_QC114_250410,	0908_QC115_250410	10-Apr-2025	17-Apr-2025	07-Oct-2025	✓	22-Apr-2025	07-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW317D_250411, 0908_MW134I_250411, 0908_MW198_250411, 0908_MW201D_250411, 0908_MW317S_250411, 0908_MW245S_250411	0908_MW134D_250411, 0908_MW196_250411, 0908_MW200_250411, 0908_MW201S_250411, 0908_MW245D_250411,	11-Apr-2025	16-Apr-2025	08-Oct-2025	✓	22-Apr-2025	08-Oct-2025	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC116_250411,	0908_QC307_250411	11-Apr-2025	17-Apr-2025	08-Oct-2025	✓	22-Apr-2025	08-Oct-2025	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0908_MW829_250407,	0908_SW011_250407	07-Apr-2025	16-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC108_250407, 0908_QC304_250407	0908_QC110_250407,	07-Apr-2025	17-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW280S_250409, 0908_MW315S_250409, 0908_MW107S_250409	0908_MW315D_250409, 0908_MW107D_250409,	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW241D_250409, 0908_MW316D_250409, 0908_MW128S_250409, 0908_MW279S_250409, 0908_QC305_250409,	0908_MW241S_250409, 0908_MW128D_250409, 0908_MW163_250409, 0908_QC111_250409, 0908_QC112_250409	09-Apr-2025	16-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW731D_250409,	0908_MW731S_250409	09-Apr-2025	17-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW159D_250410, 0908_MW318S_250410, 0908_MW844_250410	0908_MW159S_250410, 0908_MW842_250410,	10-Apr-2025	15-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW264D_250410, 0908_MW130D_250410, 0908_MW160_250410, 0908_MW161D_250410, 0908_MW132D_250410, 0908_QC113_250410,	0908_MW264S_250410, 0908_MW130S_250410, 0908_MW318D_250410, 0908_MW161S_250410, 0908_MW132I_250410, 0908_QC306_250410	10-Apr-2025	16-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC114_250410,	0908_QC115_250410	10-Apr-2025	17-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW317D_250411, 0908_MW134I_250411, 0908_MW198_250411, 0908_MW201D_250411, 0908_MW317S_250411, 0908_MW245S_250411	0908_MW134D_250411, 0908_MW196_250411, 0908_MW200_250411, 0908_MW201S_250411, 0908_MW245D_250411,	11-Apr-2025	16-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC116_250411,	0908_QC307_250411	11-Apr-2025	17-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0908_MW829_250407,	0908_SW011_250407	07-Apr-2025	16-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC108_250407, 0908_QC304_250407	0908_QC110_250407,	07-Apr-2025	17-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW280S_250409, 0908_MW315S_250409, 0908_MW107S_250409	0908_MW315D_250409, 0908_MW107D_250409,	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW241D_250409, 0908_MW316D_250409, 0908_MW128S_250409, 0908_MW279S_250409, 0908_QC305_250409,	0908_MW241S_250409, 0908_MW128D_250409, 0908_MW163_250409, 0908_QC111_250409, 0908_QC112_250409	09-Apr-2025	16-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW731D_250409,	0908_MW731S_250409	09-Apr-2025	17-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW159D_250410, 0908_MW318S_250410, 0908_MW844_250410	0908_MW159S_250410, 0908_MW842_250410,	10-Apr-2025	15-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW264D_250410, 0908_MW130D_250410, 0908_MW160_250410, 0908_MW161D_250410, 0908_MW132D_250410, 0908_QC113_250410,	0908_MW264S_250410, 0908_MW130S_250410, 0908_MW318D_250410, 0908_MW161S_250410, 0908_MW132I_250410, 0908_QC306_250410	10-Apr-2025	16-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC114_250410,	0908_QC115_250410	10-Apr-2025	17-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW317D_250411, 0908_MW134I_250411, 0908_MW198_250411, 0908_MW201D_250411, 0908_MW317S_250411, 0908_MW245S_250411	0908_MW134D_250411, 0908_MW196_250411, 0908_MW200_250411, 0908_MW201S_250411, 0908_MW245D_250411,	11-Apr-2025	16-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC116_250411,	0908_QC307_250411	11-Apr-2025	17-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_MW829_250407,	0908_SW011_250407	07-Apr-2025	16-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC108_250407, 0908_QC304_250407	0908_QC110_250407,	07-Apr-2025	17-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW280S_250409, 0908_MW315S_250409, 0908_MW107S_250409	0908_MW315D_250409, 0908_MW107D_250409,	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW241D_250409, 0908_MW316D_250409, 0908_MW128S_250409, 0908_MW279S_250409, 0908_QC305_250409,	0908_MW241S_250409, 0908_MW128D_250409, 0908_MW163_250409, 0908_QC111_250409, 0908_QC112_250409	09-Apr-2025	16-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW731D_250409,	0908_MW731S_250409	09-Apr-2025	17-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW159D_250410, 0908_MW318S_250410, 0908_MW844_250410	0908_MW159S_250410, 0908_MW842_250410,	10-Apr-2025	15-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW264D_250410, 0908_MW130D_250410, 0908_MW160_250410, 0908_MW161D_250410, 0908_MW132D_250410, 0908_QC113_250410,	0908_MW264S_250410, 0908_MW130S_250410, 0908_MW318D_250410, 0908_MW161S_250410, 0908_MW132I_250410, 0908_QC306_250410	10-Apr-2025	16-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC114_250410,	0908_QC115_250410	10-Apr-2025	17-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW317D_250411, 0908_MW134I_250411, 0908_MW198_250411, 0908_MW201D_250411, 0908_MW317S_250411, 0908_MW245S_250411	0908_MW134D_250411, 0908_MW196_250411, 0908_MW200_250411, 0908_MW201S_250411, 0908_MW245D_250411,	11-Apr-2025	16-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC116_250411,	0908_QC307_250411	11-Apr-2025	17-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0908_MW829_250407,	0908_SW011_250407	07-Apr-2025	16-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC108_250407, 0908_QC304_250407	0908_QC110_250407,	07-Apr-2025	17-Apr-2025	04-Oct-2025	✔	22-Apr-2025	04-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW280S_250409, 0908_MW315S_250409, 0908_MW107S_250409	0908_MW315D_250409, 0908_MW107D_250409,	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW241D_250409, 0908_MW316D_250409, 0908_MW128S_250409, 0908_MW279S_250409, 0908_QC305_250409,	0908_MW241S_250409, 0908_MW128D_250409, 0908_MW163_250409, 0908_QC111_250409, 0908_QC112_250409	09-Apr-2025	16-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW731D_250409,	0908_MW731S_250409	09-Apr-2025	17-Apr-2025	06-Oct-2025	✔	22-Apr-2025	06-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW159D_250410, 0908_MW318S_250410, 0908_MW844_250410	0908_MW159S_250410, 0908_MW842_250410,	10-Apr-2025	15-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW264D_250410, 0908_MW130D_250410, 0908_MW160_250410, 0908_MW161D_250410, 0908_MW132D_250410, 0908_QC113_250410,	0908_MW264S_250410, 0908_MW130S_250410, 0908_MW318D_250410, 0908_MW161S_250410, 0908_MW132I_250410, 0908_QC306_250410	10-Apr-2025	16-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC114_250410,	0908_QC115_250410	10-Apr-2025	17-Apr-2025	07-Oct-2025	✔	22-Apr-2025	07-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW317D_250411, 0908_MW134I_250411, 0908_MW198_250411, 0908_MW201D_250411, 0908_MW317S_250411, 0908_MW245S_250411	0908_MW134D_250411, 0908_MW196_250411, 0908_MW200_250411, 0908_MW201S_250411, 0908_MW245D_250411,	11-Apr-2025	16-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC116_250411,	0908_QC307_250411	11-Apr-2025	17-Apr-2025	08-Oct-2025	✔	22-Apr-2025	08-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	5	27	18.52	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	38	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	4	27	14.81	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	4	27	14.81	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	3	27	11.11	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2510539**

Amendment : **1**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.1

C-O-C number : 81111

Site : WLM SW and GW

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]

Telephone : +61 2 8784 8555

Facsimile : +61-2-8784 8500

Page : 1 of 4

Quote number : ES2024AECOMAU0012
(ES24AECOMAU0012 V3)

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 11-Apr-2025 13:10

Client Requested Due Date : 22-Apr-2025

Issue Date : 05-May-2025

Scheduled Reporting Date : **22-Apr-2025**

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : ----

Receipt Detail :

Security Seal : Not Available

Temperature : 2.0°C - Ice present

No. of samples received / analysed : 54 / 54

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **05/05/2025: This is an updated SRN indicating a change to the contacts for the distribution of the report.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2510539-001	10-Apr-2025 11:25	0908_MW159D_250410		✓
ES2510539-002	10-Apr-2025 11:31	0908_MW159S_250410		✓
ES2510539-003	10-Apr-2025 11:06	0908_MW318S_250410		✓
ES2510539-004	10-Apr-2025 09:29	0908_MW842_250410		✓
ES2510539-005	10-Apr-2025 09:13	0908_MW844_250410		✓
ES2510539-006	09-Apr-2025 16:12	0908_MW280S_250409		✓
ES2510539-007	09-Apr-2025 15:06	0908_MW315D_250409		✓
ES2510539-008	09-Apr-2025 15:10	0908_MW315S_250409		✓
ES2510539-009	09-Apr-2025 15:39	0908_MW107D_250409		✓
ES2510539-010	09-Apr-2025 15:57	0908_MW107S_250409		✓
ES2510539-011	09-Apr-2025 16:28	0908_MW241D_250409		✓
ES2510539-012	09-Apr-2025 16:22	0908_MW241S_250409		✓
ES2510539-013	09-Apr-2025 12:51	0908_MW316D_250409		✓
ES2510539-014	09-Apr-2025 13:07	0908_MW128D_250409		✓
ES2510539-015	09-Apr-2025 13:09	0908_MW128S_250409		✓
ES2510539-016	09-Apr-2025 12:41	0908_MW163_250409		✓
ES2510539-017	10-Apr-2025 08:50	0908_MW264D_250410		✓
ES2510539-018	10-Apr-2025 08:55	0908_MW264S_250410		✓
ES2510539-019	10-Apr-2025 09:44	0908_MW130D_250410		✓
ES2510539-020	10-Apr-2025 09:49	0908_MW130S_250410		✓
ES2510539-021	10-Apr-2025 10:47	0908_MW160_250410		✓
ES2510539-022	10-Apr-2025 11:15	0908_MW318D_250410	✓	
ES2510539-023	10-Apr-2025 12:39	0908_MW161D_250410	✓	
ES2510539-024	10-Apr-2025 12:42	0908_MW161S_250410	✓	
ES2510539-025	09-Apr-2025 12:11	0908_MW279S_250409	✓	
ES2510539-026	10-Apr-2025 10:16	0908_MW132D_250410	✓	
ES2510539-027	10-Apr-2025 10:26	0908_MW132I_250410	✓	
ES2510539-028	07-Apr-2025 11:05	0908_MW829_250407	✓	
ES2510539-029	11-Apr-2025 09:48	0908_MW317D_250411	✓	
ES2510539-030	11-Apr-2025 09:27	0908_MW134D_250411	✓	
ES2510539-031	11-Apr-2025 09:33	0908_MW134I_250411	✓	
ES2510539-032	11-Apr-2025 08:37	0908_MW196_250411	✓	
ES2510539-033	11-Apr-2025 08:46	0908_MW198_250411	✓	
ES2510539-034	11-Apr-2025 08:26	0908_MW200_250411	✓	
ES2510539-035	11-Apr-2025 08:16	0908_MW201D_250411	✓	



			WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2510539-036	11-Apr-2025 08:11	0908_MW201S_250411	✓	
ES2510539-037	11-Apr-2025 09:41	0908_MW317S_250411	✓	
ES2510539-038	11-Apr-2025 10:00	0908_MW245D_250411	✓	
ES2510539-039	11-Apr-2025 09:58	0908_MW245S_250411	✓	
ES2510539-040	07-Apr-2025 14:41	0908_SW011_250407	✓	
ES2510539-041	07-Apr-2025 11:05	0908_QC108_250407	✓	
ES2510539-042	07-Apr-2025 14:41	0908_QC110_250407	✓	
ES2510539-043	09-Apr-2025 12:41	0908_QC111_250409		✓
ES2510539-044	09-Apr-2025 17:37	0908_QC305_250409		✓
ES2510539-045	09-Apr-2025 16:22	0908_QC112_250409		✓
ES2510539-046	10-Apr-2025 08:50	0908_QC113_250410		✓
ES2510539-047	10-Apr-2025 10:16	0908_QC114_250410	✓	
ES2510539-048	10-Apr-2025 12:39	0908_QC115_250410	✓	
ES2510539-049	11-Apr-2025 09:27	0908_QC116_250411	✓	
ES2510539-050	07-Apr-2025 17:30	0908_QC304_250407	✓	
ES2510539-051	09-Apr-2025 14:07	0908_MW731D_250409	✓	
ES2510539-052	09-Apr-2025 14:13	0908_MW731S_250409	✓	
ES2510539-053	10-Apr-2025 14:14	0908_QC306_250410		✓
ES2510539-054	11-Apr-2025 12:28	0908_QC307_250411		✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
Phone: [REDACTED]ALS Compass COC Reference: 81111 # Samples: 54 Sampler: [REDACTED]
Phone: [REDACTED]Turnaround Requirements: Standard Urgent

Special Instructions:

ALS Use Only

Custody seal intact? YES ☒ NO ☐ N/AFree ice / frozen ice bricks upon receipt? YES ☒ NO ☐ N/ARandom sample temperature on receipt? 2.0 °C

Custody:

Relinquished by:

Date / Time: 11/4/25
1305

Received by:

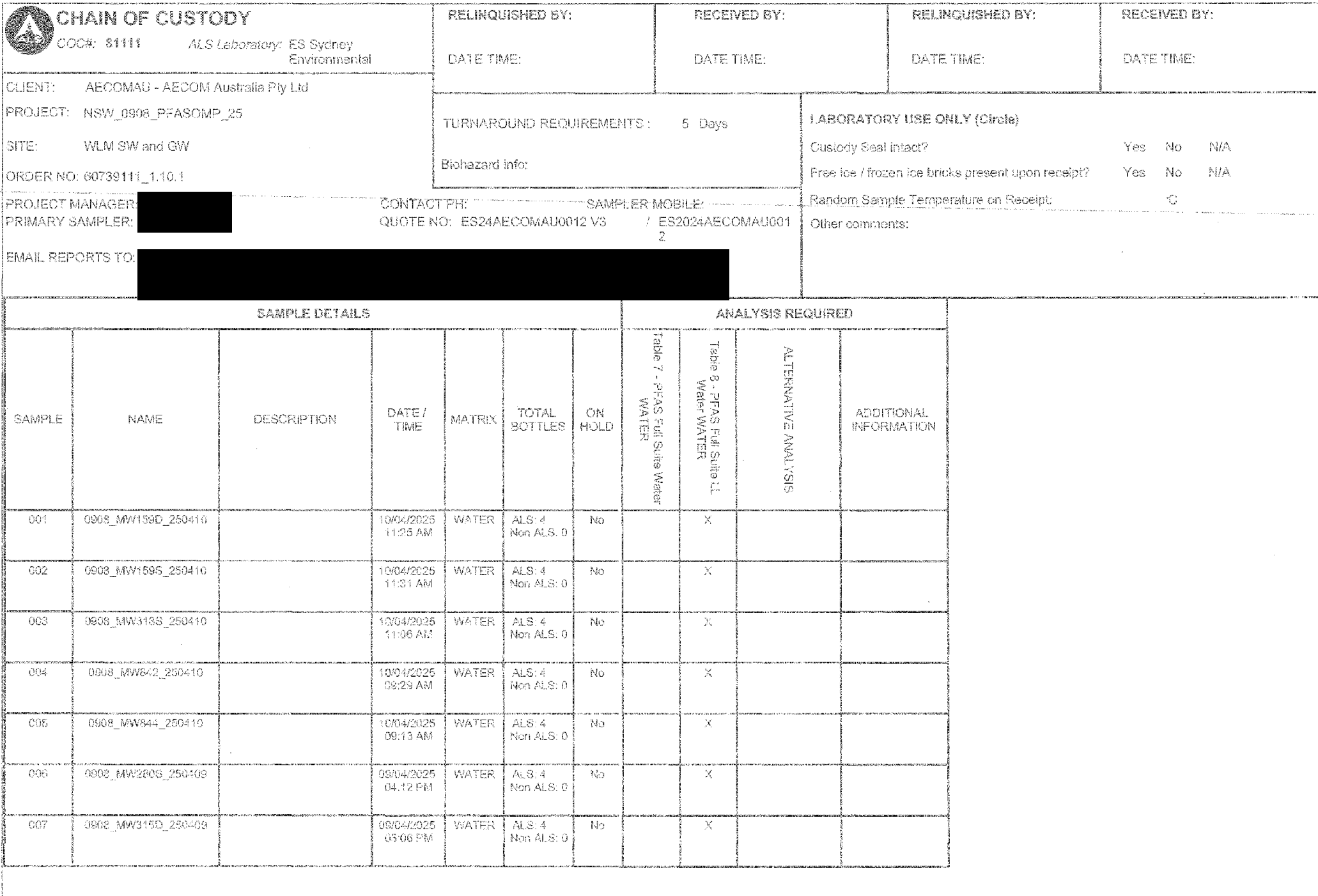
Date / Time: 11/4
13:10

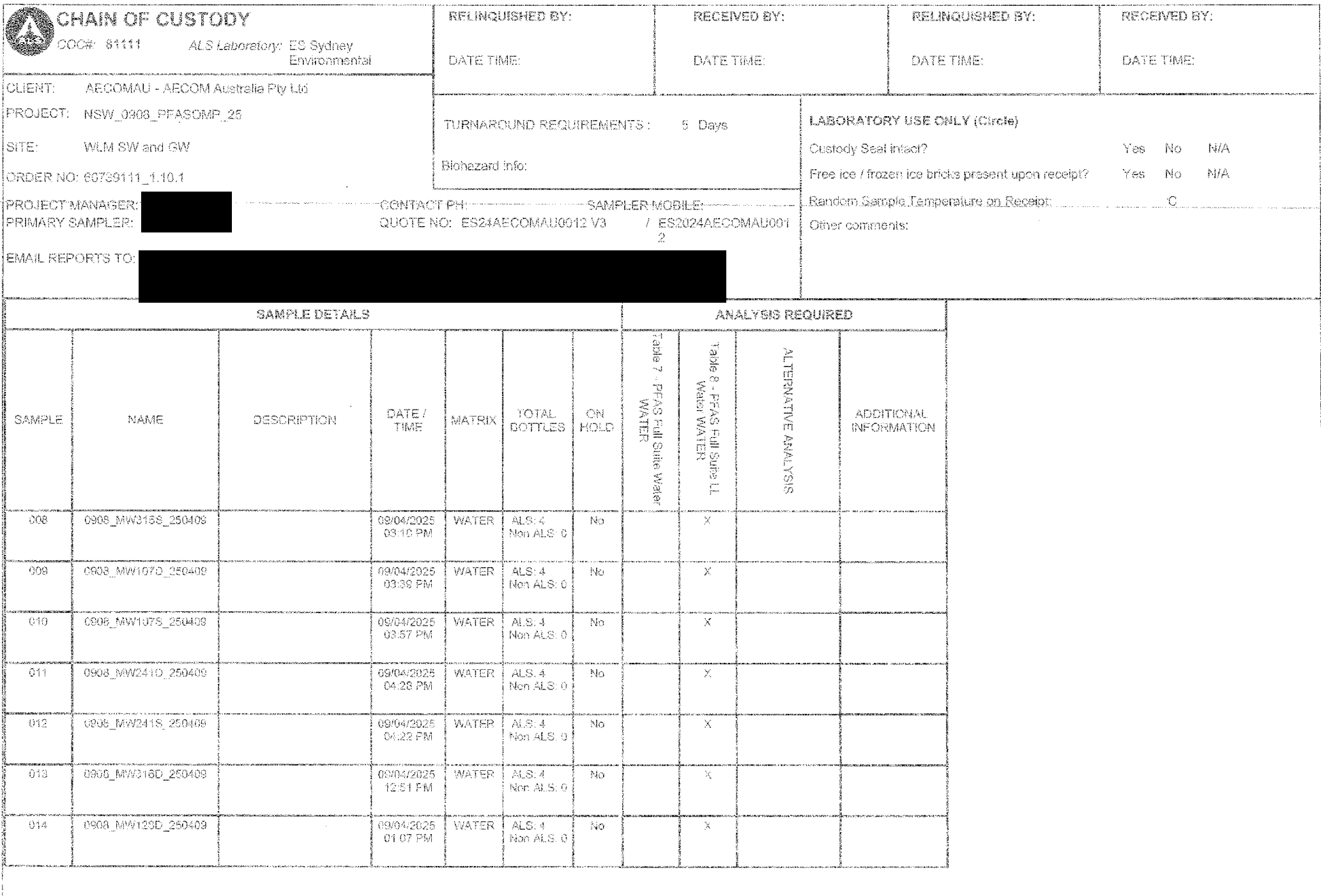
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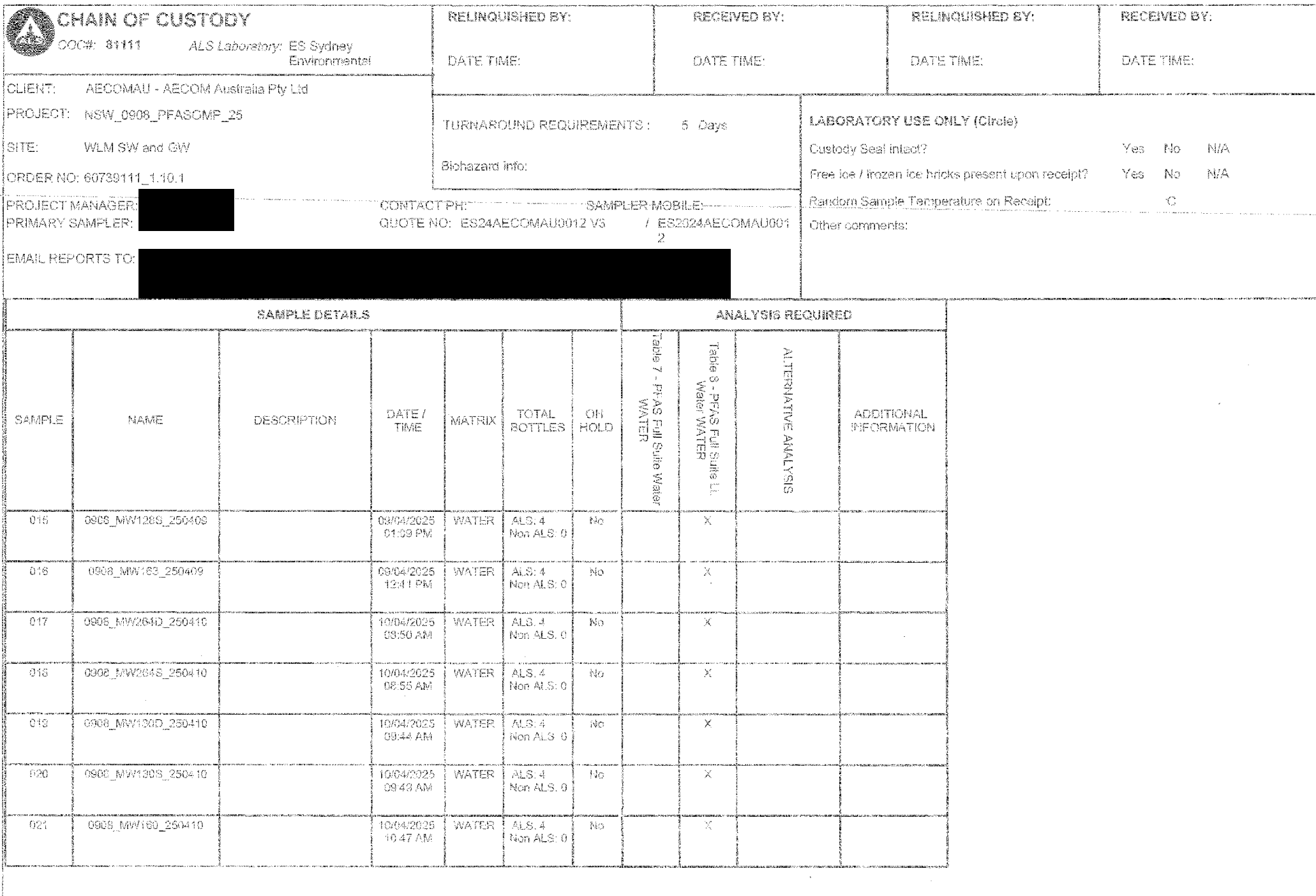
Date / Time: 1700
11/04

Received by:

Date / Time: 19:30
11/4



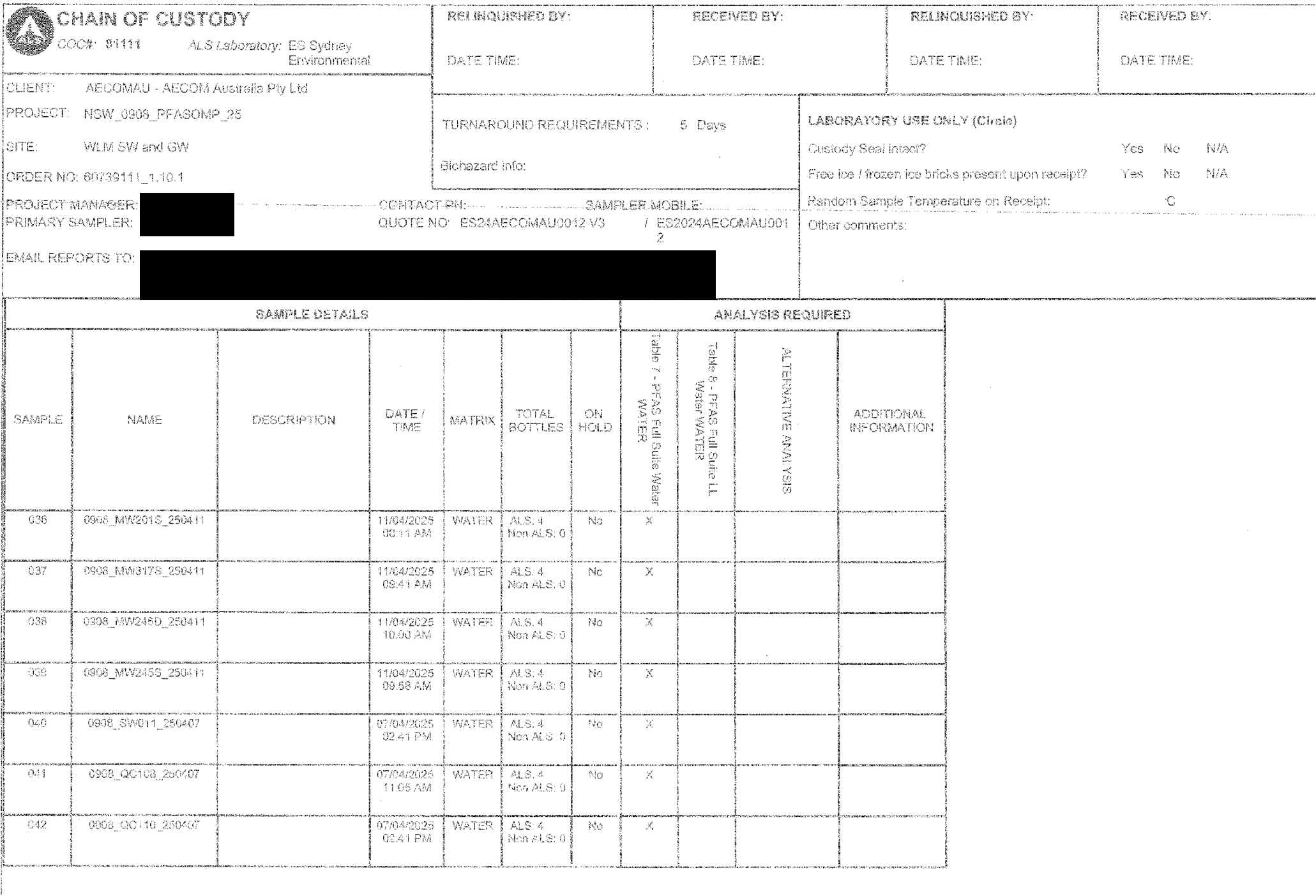


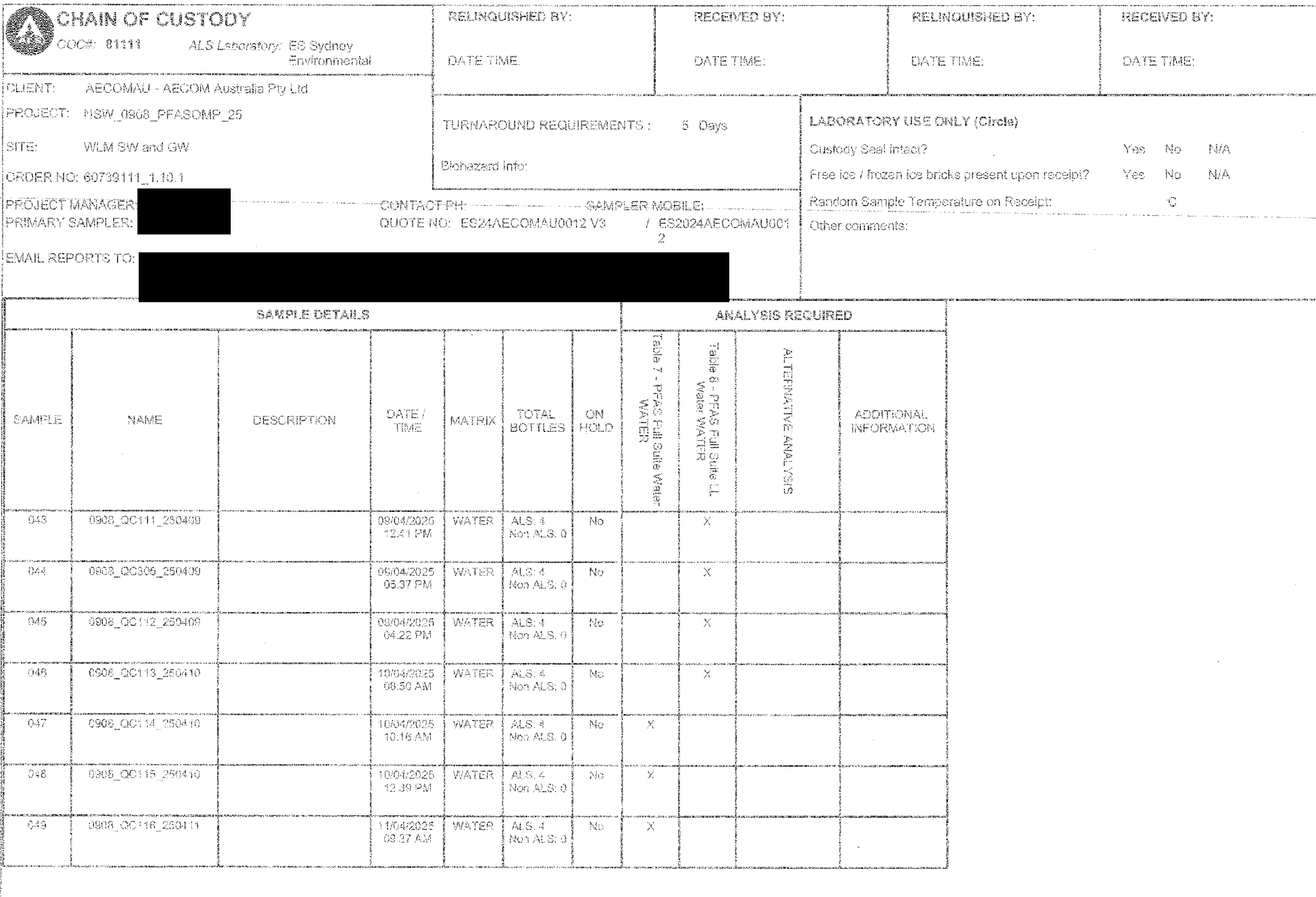


 CHAIN OF CUSTODY COC#: 81111 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.10.1		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:	
PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED]		CONTACT PH: [REDACTED] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012		SAMPLER MOBILE: [REDACTED]	
EMAIL REPORTS TO: [REDACTED]					

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
022	0908_MW318D_250410		10/04/2025 11:15 AM	WATER	ALS: 4 Non ALS: 0	No	X			
023	0908_MW161D_250410		10/04/2025 12:39 PM	WATER	ALS: 4 Non ALS: 0	No	X			
024	0908_MW161S_250410		10/04/2025 12:42 PM	WATER	ALS: 4 Non ALS: 0	No	X			
025	0908_MW278S_250409		09/04/2025 12:11 PM	WATER	ALS: 4 Non ALS: 0	No	X			
026	0908_MW132D_250410		10/04/2025 10:16 AM	WATER	ALS: 4 Non ALS: 0	No	X			
027	0908_MW182L_250410		10/04/2025 10:26 AM	WATER	ALS: 4 Non ALS: 0	No	X			
028	0908_MW829_250407		07/04/2025 11:05 AM	WATER	ALS: 4 Non ALS: 0	No	X			

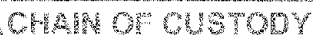
 CHAIN OF CUSTODY COC#: 81111 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
		DATE TIME:	DATE TIME:	DATE TIME:	DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle)	
PROJECT: NSW_0908_PFSOMP_25				Custody Seal intact? Yes No N/A	
SITE: WLM SW and GW				Free ice / frozen ice bricks present upon receipt? Yes No N/A	
ORDER NO: 80739111_1.10.1				Random Sample Temperature on Receipt: °C	
PROJECT MANAGER: [Redacted]		CONTACT PH: [Redacted] SAMPLER MOBILE: [Redacted]		Other comments:	
PRIMARY SAMPLER: [Redacted]		QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			
EMAIL REPORTS TO: [Redacted]					





 CHAIN OF CUSTODY COC#: 31111 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.10.1		TURNAROUND REQUIREMENTS: 5 Days Biohazard Info:		LABORATORY USE ONLY (Circle) Custody Seal Intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:	
PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		CONTACT PH: [REDACTED] SAMPLER MOBILE: [REDACTED] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
050	0908_QC304_250407		07/04/2025 05:30 PM	WATER	ALS: 4 Non ALS: 0	No	X			
051	0908_MW731D_250409		09/04/2025 02:07 PM	WATER	ALS: 4 Non ALS: 0	No	X			
052	0908_MW731S_250409		09/04/2025 02:13 PM	WATER	ALS: 4 Non ALS: 0	No	X			
053	0908_QC306_250410		10/04/2025 02:14 PM	WATER	ALS: 4 Non ALS: 0	No		X		
054	0908_QC307_250411		11/04/2025 12:22 PM	WATER	ALS: 4 Non ALS: 0	No	X			

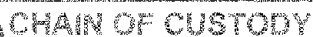


ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

9 of 10



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

ORDER NO: 60739111 1.10.1

Biohazard info:

Yes No N/A

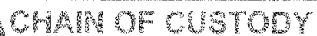
/ ES2024AECOMAU001

Other comments:

EMAIL REPORTS TO:

007	0908_MW315D_250409	HDPE (no PTFE)	20 mL	00352407181664	Grey	No
007	0908_MW315D_250409	HDPE (no PTFE)	20 mL	00352407181849	Grey	No
008	0908_MW315S_250409	HDPE (no PTFE)	20 mL	00352407181701	Grey	No
008	0908_MW315S_250409	HDPE (no PTFE)	20 mL	00352407181500	Grey	No
008	0908_MW315S_250409	HDPE (no PTFE)	20 mL	00352407181635	Grey	No
008	0908_MW315S_250409	HDPE (no PTFE)	20 mL	00352407181508	Grey	No
009	0908_MW107D_250409	HDPE (no PTFE)	20 mL	00352407181352	Grey	No
009	0908_MW107D_250409	HDPE (no PTFE)	20 mL	00352407181489	Grey	No
009	0908_MW107D_250409	HDPE (no PTFE)	20 mL	00352407181537	Grey	No
009	0908_MW107D_250409	HDPE (no PTFE)	20 mL	00352407181575	Grey	No
010	0908_MW107S_250409	HDPE (no PTFE)	20 mL	00352407181507	Grey	No
010	0908_MW107S_250409	HDPE (no PTFE)	20 mL	00352407181255	Grey	No
010	0908_MW107S_250409	HDPE (no PTFE)	20 mL	00352407181919	Grey	No
010	0908_MW107S_250409	HDPE (no PTFE)	20 mL	00352407181736	Grey	No
011	0908_MW241D_250409	HDPE (no PTFE)	20 mL	00352407181676	Grey	No
011	0908_MW241D_250409	HDPE (no PTFE)	20 mL	00352407181290	Grey	No
011	0908_MW241D_250409	HDPE (no PTFE)	20 mL	00352407181305	Grey	No
011	0908_MW241D_250409	HDPE (no PTFE)	20 mL	00352407181784	Grey	No
012	0908_MW241S_250409	HDPE (no PTFE)	20 mL	00352407181625	Grey	No
012	0908_MW241S_250409	HDPE (no PTFE)	20 mL	00352309011086	Grey	No
012	0908_MW241S_250409	HDPE (no PTFE)	20 mL	00352407181631	Grey	No
012	0908_MW241S_250409	HDPE (no PTFE)	20 mL	00352309010838	Grey	No
013	0908_MW316D_250409	HDPE (no PTFE)	20 mL	00352407181437	Grey	No
013	0908_MW316D_250409	HDPE (no PTFE)	20 mL	00352407181725	Grey	No
013	0908_MW316D_250409	HDPE (no PTFE)	20 mL	00352407181704	Grey	No
013	0908_MW316D_250409	HDPE (no PTFE)	20 mL	00352407181766	Grey	No
014	0908_MW128D_250409	HDPE (no PTFE)	20 mL	00352407181671	Grey	No



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

ORDER NO: 60739111 1.10.1

TURNAROUND REQUIREMENTS: 5 Days

Etiobazam info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
----------------------	-----	----	-----

Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
--	-----	----	-----

Random Sample Temperature on Receipt: _____ °C

~~SAMPLER MOBILE:~~

PRIMARY SAMPLER:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

Other comments:

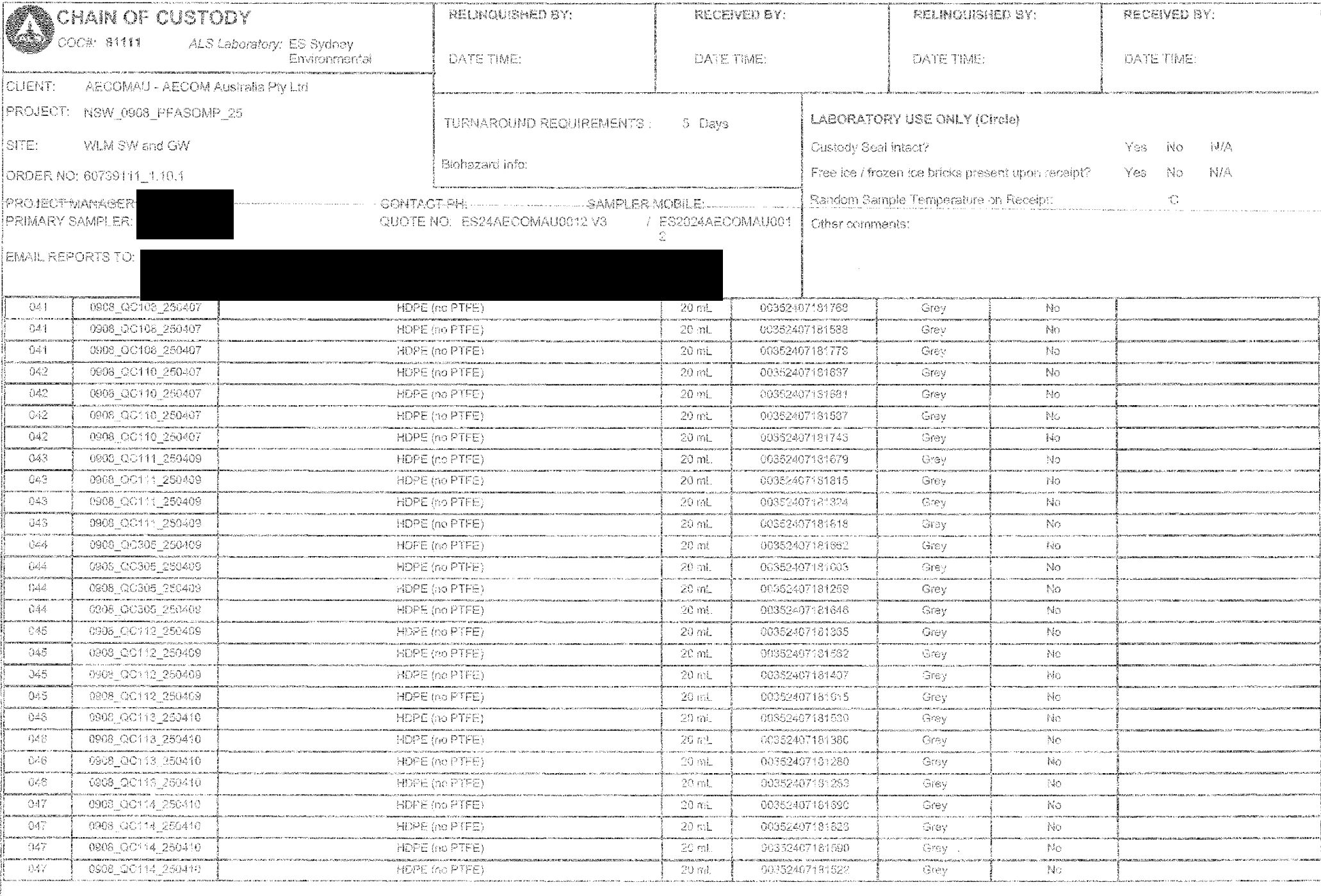
EMAIL REPORTS TO:

Friday, April 11, 2025

3:02:21 AM









 CHAIN OF CUSTODY COC#: 81111 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFAQMP_25 SITE: WLM SW and QW ORDER NO: 60739111_1.10.1		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:	
PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		CONTACT PH: [REDACTED] SAMPLER MOBILE: [REDACTED] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			
054	0908_QC307_250411	HDPE (no PTFE)	20 mL	00352407186097	Gray No
Total Bottle Count: ALS: 216, Non ALS: 0					



CERTIFICATE OF ANALYSIS

Work Order : **ES2510540**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **81113**
Sampler : **[REDACTED]**
Site : **WLM Soil**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **11-Apr-2025 13:10**
Date Analysis Commenced : **14-Apr-2025**
Issue Date : **16-Apr-2025 14:20**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Chemist	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0908_SD011_250407	0908_QC109_250407	----	----	----
Sampling date / time				07-Apr-2025 14:45	07-Apr-2025 14:45	----	----	----
Compound	CAS Number	LOR	Unit	ES2510540-001	ES2510540-002	-----	-----	-----
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	27.6	27.5	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0006	0.0009	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0195	0.0234	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.0004	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.0003	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	----	----	----

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD011_250407	0908_QC109_250407	----	----	----
Sampling date / time					07-Apr-2025 14:45	07-Apr-2025 14:45	----	----	----
Compound	CAS Number	LOR	Unit		ES2510540-001	ES2510540-002	-----	-----	-----
					Result	Result	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		0.0201	0.0254	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0201	0.0243	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0201	0.0252	----	----	----
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD011_250407	0908_QC109_250407	----	----	----
Sampling date / time					07-Apr-2025 14:45	07-Apr-2025 14:45	----	----	----
Compound	CAS Number	LOR	Unit		ES2510540-001	ES2510540-002	-----	-----	-----
					Result	Result	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%		113	106	----	----	----
13C8-PFOA	----	0.0002	%		111	105	----	----	----



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2510540	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 11-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 14-Apr-2025
C-O-C number	: 81113	Issue Date	: 16-Apr-2025
Sampler	: [REDACTED]		
Site	: WLM Soil		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Inorganics, Smithfield, NSW
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6510908)									
ES2510532-002	Anonymous	EA055: Moisture Content	----	0.1	%	13.2	14.4	8.8	0% - 20%
ES2510540-002	0908_QC109_250407	EA055: Moisture Content	----	0.1	%	27.5	28.2	2.4	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6508442)									
ES2510538-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0021	38.5	0% - 50%
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0083	0.0100	17.9	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6508442)									
ES2510538-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.0005	82.8	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.0003	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6508442) - continued									
ES2510538-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6508442)									
ES2510538-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6508442)									
ES2510538-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6508442)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	106	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.4	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.6	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	109	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508442)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	100.0	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	85.4	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.0	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	95.6	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.6	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.0	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508442)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	111	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	109	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	114	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.5	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.4	61.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) LowHigh	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6508442)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	87.1	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	102	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	115	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	120	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6508442)							
ES2510538-001	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	110	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	89.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	97.2	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	116	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	98.2	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	102	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	106	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6508442)							
ES2510538-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	97.8	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	98.3	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	86.4	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	109	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	92.8	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	93.0	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	108	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	123	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	104	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	118	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508442)							
ES2510538-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	98.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	110	71.6	129



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6508442) - continued							
ES2510538-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	112	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	106	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	102	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	86.0	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	87.4	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6508442)							
ES2510538-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	89.2	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	100	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	78.2	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	108	69.2	143



QA/QC Compliance Assessment to assist with Quality Review

Work Order : ES2510540

Page : 1 of 4

Client : AECOM AUSTRALIA PTY LTD

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Telephone : +61 2 8784 8555

Project : NSW_0908_PFASOMP_25

Date Samples Received : 11-Apr-2025

Site : WLM Soil

Issue Date : 16-Apr-2025

Sampler : [REDACTED]

No. of samples received : 2

Order number : 60739111_1.10.1

No. of samples analysed : 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2510538--001	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_SD011_250407, 0908_QC109_250407	07-Apr-2025	----	----	----	15-Apr-2025	21-Apr-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD011_250407, 0908_QC109_250407	07-Apr-2025	14-Apr-2025	04-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_SD011_250407, 0908_QC109_250407	07-Apr-2025	14-Apr-2025	04-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_SD011_250407, 0908_QC109_250407	07-Apr-2025	14-Apr-2025	04-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD011_250407, 0908_QC109_250407	07-Apr-2025	14-Apr-2025	04-Oct-2025	✓	16-Apr-2025	24-May-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_SD011_250407, 0908_QC109_250407	07-Apr-2025	14-Apr-2025	04-Oct-2025	✓	16-Apr-2025	24-May-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	13	15.38	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2510540

Client : AECOM AUSTRALIA PTY LTD
Contact : [REDACTED]
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.1

C-O-C number : 81113
Site : WLM Soil
Sampler : [REDACTED]

Laboratory : Environmental Division Sydney
Contact : [REDACTED]
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 3
Quote number : ES2024AECOMAU0012
(ES24AECOMAU0012 V3)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 11-Apr-2025 13:10
Client Requested Due : 17-Apr-2025
Date

Issue Date : 11-Apr-2025
Scheduled Reporting Date : 17-Apr-2025

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : ----
Receipt Detail :

Security Seal : Not Available
Temperature : 2.0°C - Ice present
No. of samples received / analysed : 2 / 2

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2510540-001	07-Apr-2025 14:45	0908_SD011_250407	✓	✓
ES2510540-002	07-Apr-2025 14:45	0908_QC109_250407	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

- [REDACTED]

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- [REDACTED]

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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [Redacted]
ALS Compass COC Reference: 81113 # Samples: 2 Sampler: [Redacted]
Turnaround Requirements: Standard Urgent [Redacted]

Special Instructions:

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 2.0 °C

Custody:

Relinquished by: <u>[Redacted]</u> Date / Time: <u>11/4/25</u> <u>1306</u>	Received by: <u>[Redacted]</u> Date / Time: <u>11/4</u> <u>13:06</u>	Relinquished by: <u>[Redacted]</u> Date / Time: <u>1700</u> <u>1600 11/4/25</u>	Received by: <u>[Redacted]</u> Date / Time: <u>19:30</u> <u>11/4</u>
---	---	---	---



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

ORDER NO: 60739111 1.10.1

Biohazard info:

c

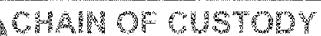
/ ES2024AECOMAU001

2

Other comments:

EMAIL REPORTS TO:

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SDD11_250407		07/04/2025 02:45 PM	SOIL	ALS: 1 Non ALS: 0	No	X		
002	0908_QC109_250407		07/04/2025 02:45 PM	SOIL	ALS: 1 Non ALS: 0	No	X		



COCK: 01113

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW 0908 PFASOMP 25

SITE: WLM Soil

ORDER NO: 60739111 1.10.1

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?	Yes	No	N/A
----------------------	-----	----	-----

Free ice / frozen ice bricks present upon receipt?	Yes	No	N/A
--	-----	----	-----

Random Sample Temperature on Receipt: C

PROJECT MANAGER:

CONTACT PH:

SAMPLER MOBILE:

PRIMARY SAMPLER:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001

Other comments:

EMAIL REPORTS TO: [REDACTED]

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_SD011_250407	HDPE Soil Jar	200 mL	00620724014625	Grey	No	
002	0908_QC109_250407	HDPE Soil Jar	200 mL	00620724014660	Grey	No	

Total Bottle Count: ALS: 2, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2510542**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **81502**
Sampler : **[REDACTED]**
Site : **Ad Hoc**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **11-Apr-2025 13:10**
Date Analysis Commenced : **15-Apr-2025**
Issue Date : **05-May-2025 12:40**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW137_250409

Sampling date / time

09-Apr-2025 14:28

Compound	CAS Number	LOR	Unit	ES2510542-001	-----	-----	-----	-----
				Result	----	----	----	----

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW137_250409

Sampling date / time

09-Apr-2025 14:28

Compound

CAS Number

LOR

Unit

ES2510542-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	92.6	----	----	----	----
13C8-PFOA	----	0.002	%	99.8	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2510542	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 11-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 15-Apr-2025
C-O-C number	: 81502	Issue Date	: 05-May-2025
Sampler	: [REDACTED]		
Site	: Ad Hoc		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6513120)									
ES2510538-003	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6513120)									
ES2510538-003	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6513120) - continued									
ES2510538-003	Anonymous	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6513120)									
ES2510538-003	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6513120)									
ES2510538-003	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513120)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	97.7	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	86.1	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	95.9	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	102	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	98.2	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	86.7	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	63.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513120)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	86.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	89.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	90.4	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	89.9	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	92.0	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	88.8	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	90.6	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	91.8	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	91.5	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	68.9	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	105	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	104	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513120)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	98.6	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.5	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	94.9	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	86.2	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	101	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	81.7	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513120) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	82.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513120)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	99.6	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	91.5	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	132	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	101	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6513120)							
ES2510542-001	0908_MW137_250409	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	75.9	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	84.1	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	89.6	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	114	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	92.5	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.5	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	58.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6513120)							
ES2510542-001	0908_MW137_250409	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	91.5	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	95.8	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	76.6	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	79.5	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	93.3	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	83.3	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	85.3	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	90.3	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	98.6	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	67.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	101	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	120	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513120)							
ES2510542-001	0908_MW137_250409	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	87.2	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6513120) - continued							
ES2510542-001	0908_MW137_250409	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	93.9	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	78.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	99.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	73.9	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	80.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6513120)							
ES2510542-001	0908_MW137_250409	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	81.1	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	86.7	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	133	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	102	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2510542	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 11-Apr-2025
Site	: Ad Hoc	Issue Date	: 05-May-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.1	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results. This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein. Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters. Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: WATER Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW137_250409	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	17-Apr-2025	06-Oct-2025	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW137_250409	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	17-Apr-2025	06-Oct-2025	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW137_250409	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	17-Apr-2025	06-Oct-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW137_250409	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	17-Apr-2025	06-Oct-2025	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW137_250409	09-Apr-2025	15-Apr-2025	06-Oct-2025	✔	17-Apr-2025	06-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	6	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	6	16.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2510542**

Amendment : **2**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.1

C-O-C number : 81502

Site : Ad Hoc

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]

Telephone : +61 2 8784 8555

Facsimile : +61-2-8784 8500

Page : 1 of 3

Quote number : ES2024AECOMAU0012
(ES24AECOMAU0012 V3)

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 11-Apr-2025 13:10

Client Requested Due Date : 05-May-2025

Issue Date : 06-May-2025

Scheduled Reporting Date : **05-May-2025**

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : ----

Receipt Detail :

Security Seal : Not Available

Temperature : 2.0°C - Ice present

No. of samples received / analysed : 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **05/05/2025: This is an updated SRN indicating a change to the contacts for the distribution of the report**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Issue Date : 06-May-2025
Page : 2 of 3
Work Order : ES2510542 Amendment 2
Client : AECOM AUSTRALIA PTY LTD

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: WATER

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2510542-001	09-Apr-2025 14:28	0908_MW137_250409	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

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Environmental Division
Sydney
Work Order Reference
ES2510542



Telephone : + 61-2-8784 8555

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 81502 # Samples: 1 Sampler: [REDACTED]
Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

Special Instructions:

ALS Use Only

Custody seal intact?	YES	NO	N/A
Free ice / frozen ice bricks upon receipt?	YES	NO	N/A
Random sample temperature on receipt?	2-0	°C	

Custody:

Relinquished by:



Date / Time: 11/4/25
1304

Received by:



Date / Time: 11/4
13:10

Relinquished by:



Date / Time: 1700
11/04

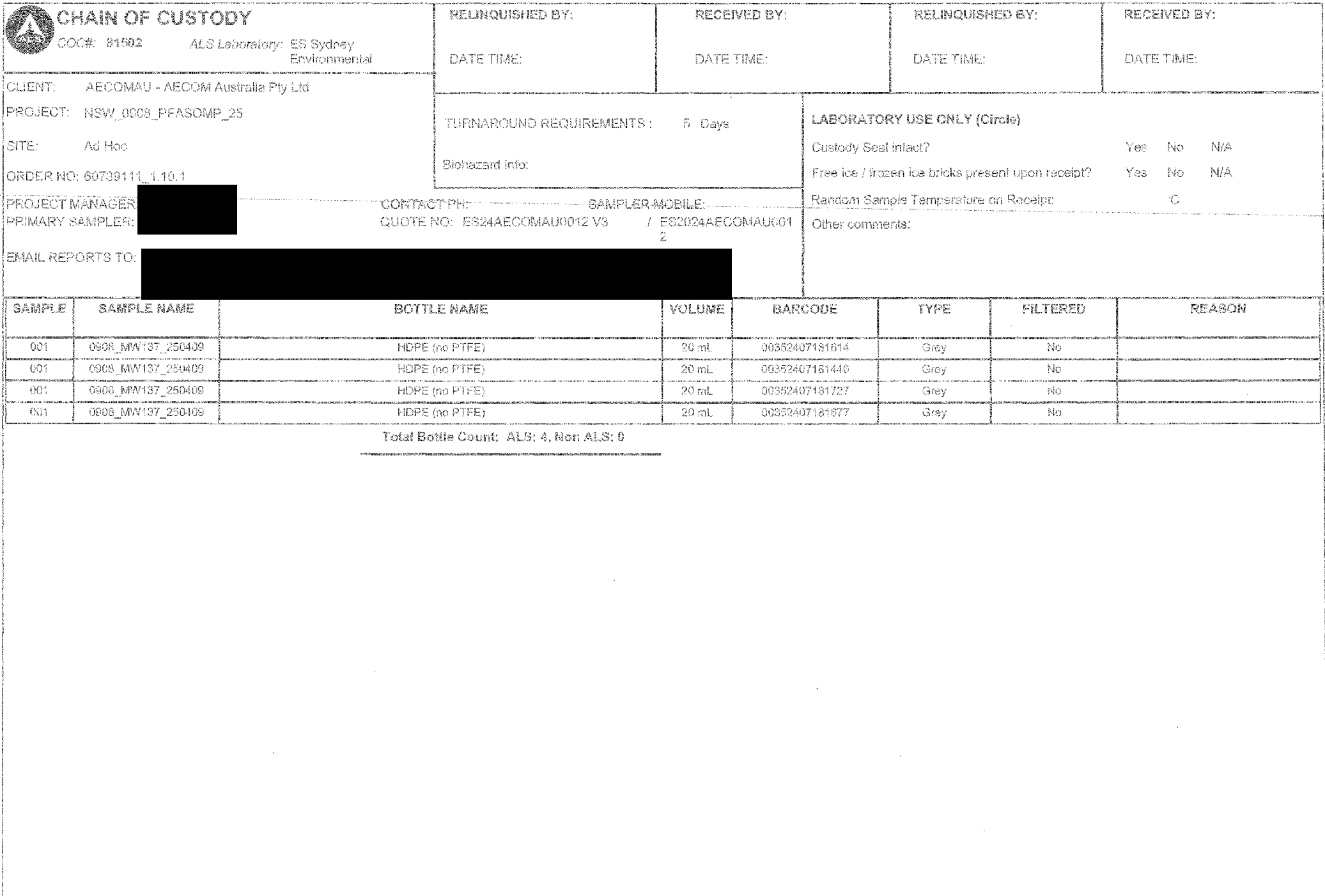
Received by:



Date / Time: 19:30
11/4

 CHAIN OF CUSTODY COC#: 81502 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Ad Hoc ORDER NO: 00739111_1.10.1		TURNAROUND REQUIREMENTS: 5 Days Biohazard Info:		LABORATORY USE ONLY (Circle) Custody Seal Intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: C Other comments:	
PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		CONTACT PH: [REDACTED] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012		SAMPLER MOBILE: [REDACTED]	

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 3 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW137_250409		09/04/2025 02:28 PM	WATER	ALS: 4 Non ALS: 0	No	X		





CERTIFICATE OF ANALYSIS

Work Order : **ES2511271**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80531**
Sampler : **[REDACTED]**
Site : **Offsite 4**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **2**
No. of samples analysed : **2**

Page : **1 of 7**
Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 15:17**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 13:11**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_POT107_25041 4	0908_MW139_250414	----	----	----
Sampling date / time				14-Apr-2025 09:42	14-Apr-2025 13:56	----	----	----
Compound	CAS Number	LOR	Unit	ES2511271-001	ES2511271-002	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	<0.002	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	0.002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	0.002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	<0.01	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	----	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_POT107_25041 4	0908_MW139_250414	----	----	----
Sampling date / time				14-Apr-2025 09:42	14-Apr-2025 13:56	----	----	----
Compound	CAS Number	LOR	Unit	ES2511271-001	ES2511271-002	-----	-----	-----
				Result	Result	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	<0.002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_POT107_25041 4	0908_MW139_250414	----	----	----
Sampling date / time				14-Apr-2025 09:42	14-Apr-2025 13:56	----	----	----
Compound	CAS Number	LOR	Unit	ES2511271-001	ES2511271-002	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	----	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_POT107_25041 4	0908_MW139_250414	----	----	----
Sampling date / time				14-Apr-2025 09:42	14-Apr-2025 13:56	----	----	----
Compound	CAS Number	LOR	Unit	ES2511271-001	ES2511271-002	-----	-----	-----
				Result	Result	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	----	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	0.004	----	----	----
Sum of PFAS	----	0.01	µg/L	0.03	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	0.004	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.03	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	0.004	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.03	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	95.9	----	----	----
13C4-PFOS	----	0.02	%	92.7	----	----	----	----
13C8-PFOA	----	0.002	%	----	96.8	----	----	----
13C8-PFOA	----	0.02	%	104	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511271	Page	: 1 of 12
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80531	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 4		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	0908_POT107_250414	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.49	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.03	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.08	15.6	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	0908_MW139_250414	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511271-002	0908_MW139_250414	EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622)									
ES2511271-001	0908_POT107_250414	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622) - continued									
ES2511299-005	Anonymous	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298)									
ES2511271-002	0908_MW139_250414	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622)									
ES2511271-001	0908_POT107_250414	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622) - continued									
ES2511271-001	0908_POT107_250414	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298)									
ES2511271-002	0908_MW139_250414	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	0908_POT107_250414	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	0908_MW139_250414	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6530622)									
ES2511271-001	0908_POT107_250414	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.03	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.98	0.94	4.2	0% - 20%

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	90.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	83.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	86.8	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	121	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	109	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.8	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	103	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)								



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298) - continued								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	87.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	83.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	81.1	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	85.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	109	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	74.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	87.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.3	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.9	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	82.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.3	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	94.0	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.0	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	90.3	61.0	135



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	118	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	79.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	99.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	88.8	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.2	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	83.6	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	106	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	119	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	85.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	110	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	102	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	83.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	91.6	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	79.9	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	102	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	106	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622) - continued							
ES2511273-002	Anonymous	EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.3	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.0	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	88.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	97.0	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	103	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	108	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.8	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	85.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	86.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.9	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	110	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	68.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	89.8	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	79.8	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	112	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	118	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	117	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.9	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	84.3	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued							
ES2511275-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	108	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	97.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	94.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	88.4	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	99.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	105	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	88.2	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	96.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	86.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511271	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 4	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.1	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_POT107_250414,	0908_MW139_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_POT107_250414,	0908_MW139_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-LL) 0908_POT107_250414,	0908_MW139_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_POT107_250414,	0908_MW139_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-LL) 0908_POT107_250414,	0908_MW139_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511271**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80531**
Site : **Offsite 4**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield**
NSW Australia 2164

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012**
(ES24AECOMAU0012 V3)
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 15:17**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2511271-001	14-Apr-2025 09:42	0908_POT107_250414	✓	
ES2511271-002	14-Apr-2025 13:56	0908_MW139_250414		✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[Redacted]

- [Redacted]

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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]

Phone: [REDACTED]

ALS Compass COC Reference: 80531 # Samples: _____

Sampler: [REDACTED]

Phone: [REDACTED]

Turnaround Requirements: Standard

LAB OF ORIGIN:
URGENT
NEWCASTLE

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact?

YES NO N/A

Free ice / frozen ice bricks upon receipt?

YES NO N/A

Random sample temperature on receipt?

35 °C

Custody:

Relinquished by:



Date / Time:

N/A 1334 17/4/25

Received by:



Date / Time:

17/4/25

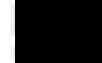


Relinquished by:



Date / Time:

17/4/25



Received by:



Date / Time:

174 1940



CHAIN OF CUSTODY

COC#: 80531

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 4

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

35 °C

Other comments:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_POT107_250414		14/04/2025 09:42 AM	WATER	ALS: 4 Non ALS: 0	No	X			
002	0908_MW139_250414		14/04/2025 01:56 PM	WATER	ALS: 4 Non ALS: 0	No		X		

Environmental Division
Sydney

Work Order Reference

ES2511271



Telephone : + 61-2-8784 8555



CHAIN OF CUSTODY

COC#: 80531

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

DATE TIME:

17/14/25 1940

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFSOMP_25

SITE: Offsite 4

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

3.5 °C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_POT107_250414	HDPE (no PTFE)	20 mL	00352407181769	Grey	No	
001	0908_POT107_250414	HDPE (no PTFE)	20 mL	00352407181822	Grey	No	
001	0908_POT107_250414	HDPE (no PTFE)	20 mL	00352407181552	Grey	No	
001	0908_POT107_250414	HDPE (no PTFE)	20 mL	00352407181465	Grey	No	
002	0908_MW139_250414	HDPE (no PTFE)	20 mL	00352407185779	Grey	No	
002	0908_MW139_250414	HDPE (no PTFE)	20 mL	00352407186018	Grey	No	
002	0908_MW139_250414	HDPE (no PTFE)	20 mL	00352407181791	Grey	No	
002	0908_MW139_250414	HDPE (no PTFE)	20 mL	00352407181572	Grey	No	

Total Bottle Count: ALS: 8, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order	: ES2511273	Page	: 1 of 9
Amendment	: 1		
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025 13:37
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80532	Issue Date	: 07-May-2025 18:00
Sampler	: [REDACTED]		
Site	: Offsite 5		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

Organic Coordinator
LCMS Coordinator

Sydney Inorganics, Smithfield, NSW
Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- Amendment (07/05/2025): This report has been amended following the addition of the sample receipt temperature.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD019_250414

Sampling date / time				14-Apr-2025 10:48	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2511273-001	-----	-----	-----	-----
Result				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	44.1	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0016	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0216	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0003	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD019_250414

Sampling date / time

14-Apr-2025 10:48

Compound

CAS Number

LOR

Unit

ES2511273-001

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
--------------------------------------	----------	--------	-------	---------	------	------	------	------

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.0002	mg/kg	0.0242	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0232	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0242	----	----	----	----

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0908_SD019_250414	----	----	----	----
			Sampling date / time	14-Apr-2025 10:48	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2511273-001	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.0002	%	99.8	----	----	----	----
13C8-PFOA	----	0.0002	%	96.9	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW019_250414

Sampling date / time

14-Apr-2025 10:45

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2511273-002

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.13	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW019_250414	----	----	----	----
Sampling date / time				14-Apr-2025 10:45	----	----	----	----	
Compound	CAS Number	LOR	Unit	ES2511273-002	-----	-----	-----	-----	
				Result	----	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	----	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	----	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	----	----	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	----	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	----	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	----	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	----	----	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	0.21	----	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.21	----	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.21	----	----	----	----	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW019_250414	----	----	----	----
				Sampling date / time	14-Apr-2025 10:45	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2511273-002	-----	-----	-----	-----
					Result	----	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		101	----	----	----	----
13C8-PFOA	----	0.02	%		95.7	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2511273**

Page : 1 of 11

Amendment : **1**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.1

C-O-C number : 80532

Sampler : [REDACTED]

Site : Offsite 5

Quote number : ES24AECOMAU0012 V3

No. of samples received : 2

No. of samples analysed : 2

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : +61 2 8784 8555

Date Samples Received : 17-Apr-2025

Date Analysis Commenced : 24-Apr-2025

Issue Date : 07-May-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

Organic Coordinator

Sydney Inorganics, Smithfield, NSW

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6530535)									
ES2511273-001	0908_SD019_250414	EA055: Moisture Content	----	0.1	%	44.1	47.7	7.9	0% - 20%
ES2511346-002	Anonymous	EA055: Moisture Content	----	0.1	%	12.3	11.7	5.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0002	0.0003	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0013	0.0010	23.9	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0218	0.0185	16.4	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218) - continued									
ES2509386-019	Anonymous	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0007	0.0006	17.9	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218) - continued									
ES2511276-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.49	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.03	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622) - continued									
ES2511299-005	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.08	15.6	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622) - continued									
ES2511271-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.03	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.98	0.94	4.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	103	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.5	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.3	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.3	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	97.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	120	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.5	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: <i>Compound</i>	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	91.2	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	106	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	122	69.2	143

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	90.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	106	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.8	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	103	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.9	66.0	145



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	82.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	118	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	79.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	99.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	88.8	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	100	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	90.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	92.8	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	89.9	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	95.5	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	99.0	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	111	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	116	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	94.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	97.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	103	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	108	69.0	135



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218) - continued							
ES2509386-019	Anonymous	EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	83.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	102	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	109	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	111	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	119	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	115	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	108	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	118	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	103	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	91.4	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	84.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	80.1	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	104	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	0908_SW019_250414	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	119	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	85.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	110	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	102	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)							
ES2511273-002	0908_SW019_250414	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.3	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.0	71.0	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622) - continued							
ES2511273-002	0908_SW019_250414	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	88.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	97.0	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	103	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)							
ES2511273-002	0908_SW019_250414	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	112	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	118	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	117	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.9	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	0908_SW019_250414	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	99.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	105	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order : ES2511273

Page : 1 of 5

Amendment : 1

Client : AECOM AUSTRALIA PTY LTD

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Telephone : +61 2 8784 8555

Project : NSW_0908_PFASOMP_25

Date Samples Received : 17-Apr-2025

Site : Offsite 5

Issue Date : 07-May-2025

Sampler : [REDACTED]

No. of samples received : 2

Order number : 60739111_1.10.1

No. of samples analysed : 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- NO Method Blank value outliers occur.
- NO Duplicate outliers occur.
- NO Laboratory Control outliers occur.
- NO Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- NO Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- NO Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_SD019_250414	14-Apr-2025	----	----	----	24-Apr-2025	28-Apr-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_SD019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_SD019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_SD019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_SW019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_SW019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓



Matrix: WATER					Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.		
Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✔	29-Apr-2025	11-Oct-2025	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW019_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✔	29-Apr-2025	11-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511273**

Amendment : **1**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.1

C-O-C number : 80532

Site : Offsite 5

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]

Telephone : +61 2 8784 8555

Facsimile : +61-2-8784 8500

Page : 1 of 4

Quote number : ES2024AECOMAU0012
(ES24AECOMAU0012 V3)

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 17-Apr-2025 13:37

Client Requested Due Date : 29-Apr-2025

Issue Date : 07-May-2025

Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : 1

Receipt Detail :

Security Seal : Not Available

Temperature : 3.5°C

No. of samples received / analysed : 2 / 2

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **07/05/2025: This is an updated SRN indicating the addition of the sample receipt temperature.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2511273-001	14-Apr-2025 10:48	0908_SD019_250414	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2511273-002	14-Apr-2025 10:45	0908_SW019_250414	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



[REDACTED]		Email	[REDACTED]
-	[REDACTED]		
-	[REDACTED]		
-	[REDACTED]		
-	[REDACTED]		
-	[REDACTED]	Email	[REDACTED]
-	[REDACTED]	Email	[REDACTED]
-	[REDACTED]	Email	[REDACTED]
-	[REDACTED]	Email	[REDACTED]
-	[REDACTED]	Email	[REDACTED]



Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 80532 # Samples: Sampler: [REDACTED]
Phone: [REDACTED] Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

LAB OF ORIGIN
NEWCASTLE

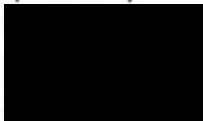
Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact?	YES	NO	N/A
Free ice / frozen ice bricks upon receipt?	YES	NO	N/A
Random sample temperature on receipt?	35 °C		

Custody:

Relinquished by:  Date / Time: 1334 17/4/25	Received by:  Date / Time: 174415 1:37r	Relinquished by:  Date / Time: 174125 82	Received by:  Date / Time: 174 1940
---	--	---	---

CHAIN OF CUSTODY COC#: 80532 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY:	[REDACTED]	RELINQUISHED BY:		RECEIVED BY:	
		DATE TIME:	17/4/25 1940	DATE TIME:		DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 5 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> Free ice / frozen ice bricks present upon receipt? Yes No <u>N/A</u> Random Sample Temperature on Receipt: 35 °C Other comments:			
		CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					

SAMPLE DETAILS							ANALYSIS REQUIRED				
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil	Table 7 - PFAS Full Suite Water	WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SD019_250414		14/04/2025 10:48 AM	SOIL	ALS: 1 Non ALS: 0	No	X				
002	0908_SW019_250414		14/04/2025 10:45 AM	WATER	ALS: 4 Non ALS: 0	No		X			

Environmental Division
Sydney
Work Order Reference
ES2511273



Telephone - 61-2-8784 8555



CHAIN OF CUSTODY

COC#: 80532

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

DATE TIME:

17/4/25 1944

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 5

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No

N/A

Free ice / frozen ice bricks present upon receipt?

Yes No

N/A

Random Sample Temperature on Receipt:

3-5 °C

Other comments:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001

2

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_SD019_250414	HDPE Soil Jar	200 mL	00620724014682	Grey	No	
002	0908_SW019_250414	HDPE (no PTFE)	20 mL	00352407181812	Grey	No	
002	0908_SW019_250414	HDPE (no PTFE)	20 mL	00352407181586	Grey	No	
002	0908_SW019_250414	HDPE (no PTFE)	20 mL	00352407181807	Grey	No	
002	0908_SW019_250414	HDPE (no PTFE)	20 mL	00352407181501	Grey	No	

Total Bottle Count: ALS: 5, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2511275**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80534**
Sampler : **[REDACTED]**
Site : **Offsite 8**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 13:12**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW270D_25041

0908_MW270S_25041

■■■■■

■■■■

— — — — —

Sampling date / time

15-Apr-2025 14:13

15-Apr-2025 14:17

1000 1000 1000 1000

1000 1000 1000 1000

1000 1000 1000 1000

Compound

CAS Number

LOR

Unit

ES2511275-001

ES2511275-002

1000 1000 1000 1000 1000 1000 1000 1000

1000 1000 1000 1000 1000 1000 1000 1000

Result

Result

1000 1000 1000 1000

0000-0000-0000-0000

0000-0000-0000-0000

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.009	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.003	0.045	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	----	----	----

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.012	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.008	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.006	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.005	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW270D_25041 5	0908_MW270S_25041 5	----	----	----
Sampling date / time				15-Apr-2025 14:13	15-Apr-2025 14:17	----	----	----
Compound	CAS Number	LOR	Unit	ES2511275-001	ES2511275-002	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.003	0.085	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.003	0.054	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.003	0.085	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	98.6	92.9	----	----	----
13C8-PFOA	----	0.002	%	104	102	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511275	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80534	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 8		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298) - continued									
ES2511271-002	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	83.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	86.8	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	121	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	109	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	87.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	83.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	81.1	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	85.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	109	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	74.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	87.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.3	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.3	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	94.0	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.0	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	90.3	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.2	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	83.6	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	106	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	0908_MW270D_250415	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	83.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	91.6	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	79.9	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	102	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	106	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)							
ES2511275-001	0908_MW270D_250415	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	108	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.8	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	85.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	86.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.9	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	110	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	68.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	89.8	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	79.8	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)							
ES2511275-001	0908_MW270D_250415	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	84.3	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued							
ES2511275-001	0908_MW270D_250415	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	108	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	97.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	94.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	88.4	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	0908_MW270D_250415	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	88.2	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	96.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	86.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511275	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 8	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.1	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_250415,	0908_MW270S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_250415,	0908_MW270S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_250415,	0908_MW270S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_250415,	0908_MW270S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_250415,	0908_MW270S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511275**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80534**
Site : **Offsite 8**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
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Page : **1 of 4**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2511275-001	15-Apr-2025 14:13	0908_MW270D_250415	✓
ES2511275-002	15-Apr-2025 14:17	0908_MW270S_250415	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

[REDACTED]
- [REDACTED]
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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
Phone: [REDACTED]

ALS Compass COC Reference: [REDACTED] # Samples: [REDACTED] Sampler: [REDACTED]
Phone: [REDACTED]

Turnaround Requirements: Standard 80534. URGENT OF ORIGIN
NEWCASTLE

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3.5 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>1334 17/4/25</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>1:37p. 17/4/25</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>17/4/25 82</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>17/4 1940</u>
--	--	--	---

CHAIN OF CUSTODY COC#: 80534 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY:		RELINQUISHED BY:	
		DATE TIME:		DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 8 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		DATE TIME: 17/04/25 1940		DATE TIME:	
		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: 3.5 °C Other comments:	
		CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW270D_250415		15/04/2025 02:13 PM	WATER	ALS: 4 Non ALS: 0	No	X		
002	0908_MW270S_250415		15/04/2025 02:17 PM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2511275



Telephone : + 61-2-9784 8555



CHAIN OF CUSTODY

COC#: 80534

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RE

DATE TIME: 17141251940

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 8

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

3.5 °C

Other comments:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW270D_250415	HDPE (no PTFE)	20 mL	00352407185427	Grey	No	
001	0908_MW270D_250415	HDPE (no PTFE)	20 mL	00352407185845	Grey	No	
001	0908_MW270D_250415	HDPE (no PTFE)	20 mL	00352407185287	Grey	No	
001	0908_MW270D_250415	HDPE (no PTFE)	20 mL	00352407185914	Grey	No	
002	0908_MW270S_250415	HDPE (no PTFE)	20 mL	00352407185942	Grey	No	
002	0908_MW270S_250415	HDPE (no PTFE)	20 mL	00352407186041	Grey	No	
002	0908_MW270S_250415	HDPE (no PTFE)	20 mL	00352407185939	Grey	No	
002	0908_MW270S_250415	HDPE (no PTFE)	20 mL	00352407186046	Grey	No	

Total Bottle Count: ALS: 8, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2511276**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80535**
Sampler : **[REDACTED]**
Site : **Offsite 10**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **5**
No. of samples analysed : **5**

Page : 1 of 9
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 10:09**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X: LOR's raised due to high moisture content.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0908_SD254_250417	0908_SD255_250417	0908_SD259_250417	0908_SD326_250417	----
Sampling date / time				17-Apr-2025 11:12	17-Apr-2025 11:17	17-Apr-2025 11:05	17-Apr-2025 11:22	----
Compound	CAS Number	LOR	Unit	ES2511276-001	ES2511276-002	ES2511276-003	ES2511276-004	-----
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	48.7	50.3	22.8	87.7	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0013	0.0006	0.0004	0.0056	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0009	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0218	0.0170	0.0033	0.164	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0002	<0.0002	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0004	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0006	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0007	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0007	<0.0002	<0.0002	0.0056	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0009	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0004	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	0.0003	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD254_250417	0908_SD255_250417	0908_SD259_250417	0908_SD326_250417	----
Sampling date / time					17-Apr-2025 11:12	17-Apr-2025 11:17	17-Apr-2025 11:05	17-Apr-2025 11:22	----
Compound	CAS Number	LOR	Unit	ES2511276-001	ES2511276-002	ES2511276-003	ES2511276-004	-----	
				Result	Result	Result	Result	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0006	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0006	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0006	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0006	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0006	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0238	0.0178	0.0037	0.179	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0231	0.0176	0.0037	0.170	----	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0238	0.0176	0.0037	0.177	----	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD254_250417	0908_SD255_250417	0908_SD259_250417	0908_SD326_250417	----
Sampling date / time					17-Apr-2025 11:12	17-Apr-2025 11:17	17-Apr-2025 11:05	17-Apr-2025 11:22	----
Compound	CAS Number	LOR	Unit		ES2511276-001	ES2511276-002	ES2511276-003	ES2511276-004	-----
					Result	Result	Result	Result	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%		101	88.0	92.6	97.4	----
13C8-PFOA	----	0.0002	%		85.8	97.2	94.9	94.2	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW259_250417

Sampling date / time

17-Apr-2025 11:01

Compound

CAS Number

LOR

Unit

ES2511276-005

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.03	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.08	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.09	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.96	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.07	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.95	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.04	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.16	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW259_250417

Sampling date / time

17-Apr-2025 11:01

Compound

CAS Number

LOR

Unit

ES2511276-005

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

2.46

Sum of PFHxS and PFOS

355-46-4/1763-23-1

0.01

µg/L

1.91

Sum of PFAS (WA DER List)

0.01

µg/L

2.27

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0908_SW259_250417	----	----	----	----
			Sampling date / time	17-Apr-2025 11:01	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2511276-005	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	101	----	----	----	----
13C8-PFOA	----	0.02	%	94.9	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511276	Page	: 1 of 11
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80535	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 10		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 5		
No. of samples analysed	: 5		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6530535)									
ES2511273-001	Anonymous	EA055: Moisture Content	----	0.1	%	44.1	47.7	7.9	0% - 20%
ES2511346-002	Anonymous	EA055: Moisture Content	----	0.1	%	12.3	11.7	5.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0002	0.0003	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	0908_SD254_250417	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0013	0.0010	23.9	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0218	0.0185	16.4	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218) - continued									
ES2509386-019	Anonymous	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2511276-001	0908_SD254_250417	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0007	0.0006	17.9	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
		EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	0908_SD254_250417	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218) - continued									
ES2511276-001	0908_SD254_250417	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	0908_SD254_250417	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.49	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.03	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622) - continued									
ES2511299-005	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.08	15.6	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622) - continued									
ES2511271-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.03	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.98	0.94	4.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	103	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.5	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.3	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.3	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	97.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	120	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.5	61.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) LowHigh	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	91.2	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	106	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	122	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	90.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	106	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.8	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	103	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.9	66.0	145



Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	82.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	118	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	79.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	99.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	88.8	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	100	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	90.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	92.8	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	89.9	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	95.5	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	99.0	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	111	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	116	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	94.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	97.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	103	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	108	69.0	135



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218) - continued							
ES2509386-019	Anonymous	EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	83.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	102	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	109	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	111	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	119	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	115	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	108	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	118	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	103	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	91.4	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	84.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	80.1	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	104	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	119	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	85.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	110	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	102	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.3	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.0	71.0	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622) - continued							
ES2511273-002	Anonymous	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	88.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	97.0	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	103	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	112	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	118	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	117	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.9	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	99.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	105	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511276	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 10	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 5
Order number	: 60739111_1.10.1	No. of samples analysed	: 5

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0908_SD254_250417, 0908_SD259_250417,	0908_SD255_250417, 0908_SD326_250417	17-Apr-2025	----	----	----	24-Apr-2025	01-May-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SD254_250417, 0908_SD259_250417,	0908_SD255_250417, 0908_SD326_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0908_SD254_250417, 0908_SD259_250417,	0908_SD255_250417, 0908_SD326_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0908_SD254_250417, 0908_SD259_250417,	0908_SD255_250417, 0908_SD326_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SD254_250417, 0908_SD259_250417,	0908_SD255_250417, 0908_SD326_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0908_SD254_250417, 0908_SD259_250417,	0908_SD255_250417, 0908_SD326_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908 SW259 250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_SW259_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_SW259_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW259_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW259_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511276**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80535**
Site : **Offsite 10**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 4**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **5 / 5**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2511276-001	17-Apr-2025 11:12	0908_SD254_250417	✓	✓
ES2511276-002	17-Apr-2025 11:17	0908_SD255_250417	✓	✓
ES2511276-003	17-Apr-2025 11:05	0908_SD259_250417	✓	✓
ES2511276-004	17-Apr-2025 11:22	0908_SD326_250417	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2511276-005	17-Apr-2025 11:01	0908_SW259_250417	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
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- [REDACTED]

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Gender	Age Group	Percentage
Male	18-24	~85%
	25-34	~95%
	35-44	~65%
Female	18-24	~85%
	25-34	~90%
	35-44	~65%

Email	
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Email	



Telephone : + 61-2-8784 8555

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
Phone: [REDACTED]

ALS Compass COC Reference: 80535 # Samples: Sampler: [REDACTED]
Phone: [REDACTED]

Turnaround Requirements: Standard

LAB OF ORIGIN:
URGENT
NEWCASTLE

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact?	YES	NO	N/A
Free ice / frozen ice bricks upon receipt?	YES	NO	N/A
Random sample temperature on receipt?	3.5	°C	

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>1334 17/4/25</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>17/4/25 1:37p</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>17/4/25 8L</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>17/4 1940</u>
--	---	--	---

CHAIN OF CUSTODY COC#: 80535 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:		R [REDACTED] DATE TIME: 17/4/25 1940		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:			
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 10 ORDER NO: 80739111_1.10.1				TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free ice</u> / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: <u>35</u> °C Other comments:					
PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]				CONTACT PH: [REDACTED] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012 SAMPLER MOBILE: [REDACTED]							
SAMPLE DETAILS							ANALYSIS REQUIRED			Environmental Division Sydney Work Order Reference ES2511276  Telephone: + 61-2-8784 8566	
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil	Table 7 - PFAS Full Suite Water	ALTERNATIVE ANALYSIS		ADDITIONAL INFORMATION
001	0908_SD254_250417		17/04/2025 11:12 AM	SOIL	ALS: 1 Non ALS: 0	No	X				
002	0908_SD255_250417		17/04/2025 11:17 AM	SOIL	ALS: 1 Non ALS: 0	No	X				
003	0908_SD259_250417		17/04/2025 11:05 AM	SOIL	ALS: 1 Non ALS: 0	No	X				
004	0908_SD326_250417		17/04/2025 11:22 AM	SOIL	ALS: 1 Non ALS: 0	No	X				
005	0908_SW259_250417		17/04/2025 11:01 AM	WATER	ALS: 4 Non ALS: 0	No		X			

CHAIN OF CUSTODY COC#: 80535 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	 17/4/25 1940	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 10 ORDER NO: 60739111_1.10.1		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free ice</u> / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: 3.5 °C Other comments:			
PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		CONTACT PH: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012 SAMPLER MOBILE:					
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_SD254_250417	HDPE Soil Jar	200 mL	00620724014641	Grey	No	
002	0908_SD255_250417	HDPE Soil Jar	200 mL	00620724014577	Grey	No	
003	0908_SD259_250417	HDPE Soil Jar	200 mL	00620724032473	Grey	No	
004	0908_SD326_250417	HDPE Soil Jar	200 mL	00620724014866	Grey	No	
005	0908_SW259_250417	HDPE (no PTFE)	20 mL	00352407185751	Grey	No	
005	0908_SW259_250417	HDPE (no PTFE)	20 mL	00352407185828	Grey	No	
005	0908_SW259_250417	HDPE (no PTFE)	20 mL	00352407181554	Grey	No	
005	0908_SW259_250417	HDPE (no PTFE)	20 mL	00352407181293	Grey	No	
Total Bottle Count: ALS: 8, Non ALS: 0							



CERTIFICATE OF ANALYSIS

Work Order : **ES2511277**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80536**
Sampler : **[REDACTED]**
Site : **Offsite 7**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 13:11**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW230S_25041
5

Sampling date / time

15-Apr-2025 08:57

Compound	CAS Number	LOR	Unit
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ES2511277-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.007	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	0.004	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.022	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.004	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.010	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.004	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW230S_25041
5

Sampling date / time

15-Apr-2025 08:57

Compound CAS Number LOR Unit

ES2511277-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.051	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.022	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.047	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	93.0	----	----	----	----
13C8-PFOA	----	0.002	%	105	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511277	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80536	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 7		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298) - continued									
ES2511271-002	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	83.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	86.8	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	121	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	109	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	87.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	83.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	81.1	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	85.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	109	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	74.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	87.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.3	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.3	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	94.0	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.0	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	90.3	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.2	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	83.6	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	106	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	83.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	91.6	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	79.9	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	102	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	106	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	108	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.8	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	85.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	86.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.9	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	110	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	68.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	89.8	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	79.8	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	84.3	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued							
ES2511275-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	108	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	97.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	94.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	88.4	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	88.2	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	96.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	86.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511277	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 7	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.1	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511277**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80536**
Site : **Offsite 7**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield**
NSW Australia 2164

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012**
(ES24AECOMAU0012 V3)
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **1 / 1**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2511277-001	15-Apr-2025 08:57	0908_MW230S_250415	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[Redacted]

- [Redacted]

Email

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ALSCompass
SAMPLING *Intelligence*



ES2511277

ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 60739111

Client: AECOM

Project Manager: [REDACTED]

Phone: [REDACTED]

ALS Compass COC Reference: 80536

Samples: _____

Sampler: [REDACTED]

Phone: [REDACTED]

Turnaround Requirements: Standard

LAB OF ORIGIN
NEWCASTLE
Urgent

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact?

YES NO N/A

Free ice / frozen ice bricks upon receipt?

YES NO N/A

Random sample temperature on receipt?

3.5 °C

Custody:

Relinquished by:

Date / Time:

1334 17/4/25

Received by:

Date / Time:

17/4/25
1:37

Relinquished by:

Date / Time:

17/4/25
82

Received by:

Date / Time:

17/4 1940



CHAIN OF CUSTODY

COC#: 80536

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

DATE TIME:

17/4/25 190

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 7

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No ☒ N/A

Free ice / frozen ice bricks present upon receipt?

☒ Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

3.5

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW230S_250415		15/04/2025 08:57 AM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2511277



Telephone: + 61-2-8784 8655



CHAIN OF CUSTODY

COCH#: 80536

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

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RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 7

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

3.5 °C

Other comments:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW230S_250415	HDPE (no PTFE)	20 mL	00352309010654	Grey	No	
001	0908_MW230S_250415	HDPE (no PTFE)	20 mL	00352407198247	Grey	No	
001	0908_MW230S_250415	HDPE (no PTFE)	20 mL	00352407198293	Grey	No	
001	0908_MW230S_250415	HDPE (no PTFE)	20 mL	00352309010902	Grey	No	

Total Bottle Count: ALS: 4, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2511279**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80537**
Sampler : **[REDACTED]**
Site : **Offsite 11**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **3**
No. of samples analysed : **3**

Page : **1 of 7**
Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 13:11**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25041 7	0908_MW231S_25041 7	0908_POT382_25041 6	----	----
Sampling date / time				17-Apr-2025 12:23	17-Apr-2025 12:30	16-Apr-2025 10:12	----	----
Compound	CAS Number	LOR	Unit	ES2511279-001	ES2511279-002	ES2511279-003	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	<0.02	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	0.02	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	0.08	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	<0.01	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	<0.01	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	<0.002	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25041 7	0908_MW231S_25041 7	0908_POT382_25041 6	----	----
Sampling date / time				17-Apr-2025 12:23	17-Apr-2025 12:30	16-Apr-2025 10:12	----	----
Compound	CAS Number	LOR	Unit	ES2511279-001	ES2511279-002	ES2511279-003	-----	-----
				Result	Result	Result	----	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	<0.005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	<0.005	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	<0.05	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25041 7	0908_MW231S_25041 7	0908_POT382_25041 6	----	----
Sampling date / time				17-Apr-2025 12:23	17-Apr-2025 12:30	16-Apr-2025 10:12	----	----
Compound	CAS Number	LOR	Unit	ES2511279-001	ES2511279-002	ES2511279-003	-----	-----
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	<0.005	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	<0.005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	<0.005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	<0.005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	<0.002	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	<0.002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	<0.005	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25041 7	0908_MW231S_25041 7	0908_POT382_25041 6	----	----
Sampling date / time				17-Apr-2025 12:23	17-Apr-2025 12:30	16-Apr-2025 10:12	----	----
Compound	CAS Number	LOR	Unit	ES2511279-001	ES2511279-002	ES2511279-003	-----	-----
				Result	Result	Result	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	----	<0.002	----	----
Sum of PFAS	----	0.01	µg/L	----	0.10	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	<0.002	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	0.10	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	<0.002	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	0.10	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	97.3	----	93.4	----	----
13C4-PFOS	----	0.02	%	----	107	----	----	----
13C8-PFOA	----	0.002	%	102	----	101	----	----
13C8-PFOA	----	0.02	%	----	94.6	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511279	Page	: 1 of 12
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80537	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 11		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 3		
No. of samples analysed	: 3		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.49	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.03	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.08	15.6	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511271-002	Anonymous	EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622) - continued									
ES2511299-005	Anonymous	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622) - continued									
ES2511271-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.03	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.98	0.94	4.2	0% - 20%

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	90.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	83.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	86.8	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	121	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	109	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.8	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	103	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)								



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298) - continued								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	87.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	83.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	81.1	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	85.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	109	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	74.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	87.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.3	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.9	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	82.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.3	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	94.0	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.0	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	90.3	61.0	135



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	118	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	79.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	99.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	88.8	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.2	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	83.6	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	106	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	119	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	85.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	110	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	102	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	83.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	91.6	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	79.9	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	102	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	106	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622) - continued							
ES2511273-002	Anonymous	EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.3	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.0	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	88.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	97.0	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	103	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	108	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.8	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	85.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	86.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.9	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	110	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	68.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	89.8	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	79.8	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	112	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	118	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	117	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.9	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	84.3	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued							
ES2511275-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	108	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	97.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	94.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	88.4	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	99.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	105	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	88.2	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	96.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	86.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511279	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 11	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 3
Order number	: 60739111_1.10.1	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT382_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW231D_250417, 0908_MW231S_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	14-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT382_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW231D_250417, 0908_MW231S_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	14-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_POT382_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW231D_250417, 0908_MW231S_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	14-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT382_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW231D_250417, 0908_MW231S_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	14-Oct-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_POT382_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓
HDPE (no PTFE) (EP231X) 0908_MW231D_250417, 0908_MW231S_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	14-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511279**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80537**
Site : **Offsite 11**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **3 / 3**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2511279-001	17-Apr-2025 12:23	0908_MW231D_250417		✓
ES2511279-002	17-Apr-2025 12:30	0908_MW231S_250417	✓	
ES2511279-003	16-Apr-2025 10:12	0908_POT382_250416		✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

- [REDACTED]

Email

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- [REDACTED]

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Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]

Email

[REDACTED]



Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
Phone: [REDACTED]
ALS Compass COC Reference: 80537 # Samples: 1 Sampler: [REDACTED]
Phone: [REDACTED]
Turnaround Requirements: Standard **LAB OF ORIGIN: NEWCASTLE**

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3.5 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>1334 17/4/25</u>	Received by: <u>[REDACTED]</u> <u>17/4/25</u> Date / Time: <u>1:37pm</u>	Relinquished by: <u>[REDACTED]</u> <u>17/4/25</u> Date / Time: <u>82</u>	Received by: <u>[REDACTED]</u> <u>17/4 1940</u> Date / Time:
--	--	--	---



CHAIN OF CUSTODY

COC#: 80537

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:



DATE TIME:
17/4/25 1940

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 11

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No

N/A

Free ice / frozen ice bricks present upon receipt?

Yes No

N/A

Random Sample Temperature on Receipt:

3.5

-C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW231D_250417		17/04/2025 12:23 PM	WATER	ALS: 4 Non ALS: 0	No		X		
002	0908_MW231S_250417		17/04/2025 12:30 PM	WATER	ALS: 4 Non ALS: 0	No	X			
003	0908_POT382_250416		16/04/2025 10:12 AM	WATER	ALS: 4 Non ALS: 0	No		X		

Environmental Division
Sydney
Work Order Reference
ES2511279



Telephone + 61-2-8784 8555



CHAIN OF CUSTODY

COC#: 80537

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

DATE TIME:

17/4/25 1940

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFSOMP_25

SITE: Offsite 11

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact? Yes No N/A

Free ice / frozen ice bricks present upon receipt? Yes No N/A

Random Sample Temperature on Receipt: C

Other comments:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW231D_250417	HDPE (no PTFE)	20 mL	00352407181372	Grey	No	
001	0908_MW231D_250417	HDPE (no PTFE)	20 mL	00352407181607	Grey	No	
001	0908_MW231D_250417	HDPE (no PTFE)	20 mL	00352407181284	Grey	No	
001	0908_MW231D_250417	HDPE (no PTFE)	20 mL	00352407181593	Grey	No	
002	0908_MW231S_250417	HDPE (no PTFE)	20 mL	00352407181762	Grey	No	
002	0908_MW231S_250417	HDPE (no PTFE)	20 mL	00352407181296	Grey	No	
002	0908_MW231S_250417	HDPE (no PTFE)	20 mL	00352407181548	Grey	No	
002	0908_MW231S_250417	HDPE (no PTFE)	20 mL	00352407181482	Grey	No	
003	0908_POT382_250416	HDPE (no PTFE)	20 mL	00352407181342	Grey	No	
003	0908_POT382_250416	HDPE (no PTFE)	20 mL	00352407181492	Grey	No	
003	0908_POT382_250416	HDPE (no PTFE)	20 mL	00352407181589	Grey	No	
003	0908_POT382_250416	HDPE (no PTFE)	20 mL	00352407181317	Grey	No	

Total Bottle Count: ALS: 12, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2511281**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80538**
Sampler : **[REDACTED]**
Site : **Offsite 9**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 9
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 10:07**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD333_250416

Sampling date / time				16-Apr-2025 09:07	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2511281-001	-----	-----	-----	-----
Result				----	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	49.1	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0005	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0104	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0006	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0165	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0029	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0004	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD333_250416

Sampling date / time

16-Apr-2025 09:07

Compound CAS Number LOR Unit

ES2511281-001

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	----	----	----	----
--------------------------------------	----------	--------	-------	---------	------	------	------	------

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.0002	mg/kg	0.0318	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0269	----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0307	----	----	----	----

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)			Sample ID	0908_SD333_250416	----	----	----	----
			Sampling date / time	16-Apr-2025 09:07	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2511281-001	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.0002	%	89.3	----	----	----	----
13C8-PFOA	----	0.0002	%	93.3	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW333_250416

Sampling date / time

16-Apr-2025 09:05

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2511281-002

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.06	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.17	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.21	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	2.42	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.16	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.56	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.08	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.42	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.07	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.13	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW333_250416

Sampling date / time

16-Apr-2025 09:05

Compound

CAS Number

LOR

Unit

ES2511281-002

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

5.28

Sum of PFHxS and PFOS

355-46-4/1763-23-1

0.01

µg/L

3.98

Sum of PFAS (WA DER List)

0.01

µg/L

4.85

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0908_SW333_250416	----	----	----	----
			Sampling date / time	16-Apr-2025 09:05	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2511281-002	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	102	----	----	----	----
13C8-PFOA	----	0.02	%	95.3	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511281	Page	: 1 of 11
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80538	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 9		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6530535)									
ES2511273-001	Anonymous	EA055: Moisture Content	----	0.1	%	44.1	47.7	7.9	0% - 20%
ES2511346-002	Anonymous	EA055: Moisture Content	----	0.1	%	12.3	11.7	5.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0002	0.0003	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0013	0.0010	23.9	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0218	0.0185	16.4	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218) - continued									
ES2509386-019	Anonymous	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0007	0.0006	17.9	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218) - continued									
ES2511276-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.49	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.03	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622) - continued									
ES2511299-005	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.08	15.6	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622) - continued									
ES2511271-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.03	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.98	0.94	4.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	103	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.5	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.3	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.3	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	97.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	120	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.5	61.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	91.2	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	106	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	122	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	90.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	106	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.8	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	103	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.9	66.0	145



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	82.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	118	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	79.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	99.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	88.8	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	100	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	90.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	92.8	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	89.9	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	95.5	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	99.0	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	111	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	116	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	94.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	97.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	103	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	108	69.0	135



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218) - continued							
ES2509386-019	Anonymous	EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	83.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	102	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	109	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	111	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	119	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	115	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	108	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	118	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	103	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	91.4	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	84.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	80.1	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	104	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	119	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	85.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	110	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	102	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.3	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.0	71.0	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622) - continued							
ES2511273-002	Anonymous	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	88.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	97.0	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	103	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	112	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	118	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	117	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.9	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	99.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	105	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511281	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 9	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.1	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_SD333_250416	16-Apr-2025	----	----	----	24-Apr-2025	30-Apr-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_SD333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_SD333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_SD333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_SW333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_SW333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✓	29-Apr-2025	13-Oct-2025	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW333_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511281**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80538**
Site : **Offsite 9**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield**
NSW Australia 2164

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012**
(ES24AECOMAU0012 V3)
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2511281-001	16-Apr-2025 09:07	0908_SD333_250416	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2511281-002	16-Apr-2025 09:05	0908_SW333_250416	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[Redacted]

- [Redacted]

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- [Redacted]

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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
 Phone: [REDACTED]
 ALS Compass COC Reference: 80538 # Samples: Sampler: [REDACTED]
 Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

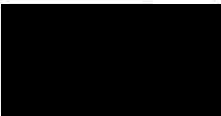
Special Instructions:

LAB OF ORIGIN:
NEWCASTLE

E-MAILED

ALS Use Only		
Custody seal intact?	YES	NO <u>N/A</u>
Free ice / frozen ice bricks upon receipt?	YES	NO <u>N/A</u>
Random sample temperature on receipt?	<u>3.5</u> °C	

Custody:

Relinquished by:  Date / Time: <u>1334 17/4/25</u>	Received by:  Date / Time: <u>17/4/25 1:37</u>	Relinquished by:  <u>17/4/25</u> <u>52</u> Date / Time:	Received by:  Date / Time: <u>17/4 1940</u>
--	--	--	---

 CHAIN OF CUSTODY COC#: 80538 ALS Laboratory: ES Sydney Environmental	RELINQUISHED BY:		RELINQUISHED BY:	RECEIVED BY:
	DATE TIME:	DATE TIME: 17/4/25 1940	DATE TIME:	DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd	TURNAROUND REQUIREMENTS: 5 Days		LABORATORY USE ONLY (Circle)	
PROJECT: NSW_0908_PFASOMP_25	Biohazard info:		Custody Seal intact? Yes No <u>N/A</u>	
SITE: Offsite 9			Free ice / frozen ice bricks present upon receipt? Yes No N/A	
ORDER NO: 60739111_1.10.1			Random Sample Temperature on Receipt: 3-5 °C	
PROJECT MANAGER:	CONTACT PH:	SAMPLER MOBILE:	Other comments:	
PRIMARY SAMPLER:	QUOTE NO: ES24AECOMAU0012 V3	/ ES2024AECOMAU0012		
EMAIL REPORTS TO:				

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil	Table 7 - PFAS Full Suite Water	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SD333_250416		16/04/2025 09:07 AM	SOIL	ALS: 1 Non ALS: 0	No	X			
002	0908_SW333_250416		16/04/2025 09:05 AM	WATER	ALS: 4 Non ALS: 0	No		X		

Environmental Division
Sydney
Work Order Reference
ES2511281



Telephone: + 61-2-8784 8555



CHAIN OF CUSTODY

COC#: 80538

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:



DATE TIME:
17/4/25 1940

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFSOMP_25

SITE: Offsite 9

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3

/ ES2024AECOMAU001

2

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No

N/A

Free ice / frozen ice bricks present upon receipt?

Yes No

N/A

Random Sample Temperature on Receipt:

°C

Other comments:

3-5

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_SD333_250416	HDPE Soil Jar	200 mL	00620724032562	Grey	No	
002	0908_SW333_250416	HDPE (no PTFE)	20 mL	00352407181700	Grey	No	
002	0908_SW333_250416	HDPE (no PTFE)	20 mL	00352407181281	Grey	No	
002	0908_SW333_250416	HDPE (no PTFE)	20 mL	00352407181851	Grey	No	
002	0908_SW333_250416	HDPE (no PTFE)	20 mL	00352407181457	Grey	No	

Total Bottle Count: ALS: 5, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2511282**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **81784**
Sampler : **[REDACTED]**
Site : **Ad Hoc 3**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 10:09**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SS332_250417	0908_QC100_250417	----	----	----
Sampling date / time					17-Apr-2025 09:14	17-Apr-2025 09:14	----	----	----
Compound	CAS Number	LOR	Unit		ES2511282-001	ES2511282-002	-----	-----	-----
				Result	Result		----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		27.1	16.1	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg		0.0003	0.0004	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg		<0.001	<0.001	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg		<0.0002	<0.0002	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SS332_250417	0908_QC100_250417	----	----	----
Sampling date / time					17-Apr-2025 09:14	17-Apr-2025 09:14	----	----	----
Compound	CAS Number	LOR	Unit		ES2511282-001	ES2511282-002	-----	-----	-----
					Result	Result	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002	<0.0002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005	<0.0005	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg		0.0003	0.0004	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0003	0.0004	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0003	0.0004	----	----	----
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SS332_250417	0908_QC100_250417	----	----	----
				Sampling date / time	17-Apr-2025 09:14	17-Apr-2025 09:14	----	----	----
Compound	CAS Number	LOR	Unit		ES2511282-001	ES2511282-002	-----	-----	-----
					Result	Result	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%		102	102	----	----	----
13C8-PFOA	----	0.0002	%		92.0	93.4	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511282	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 81784	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Ad Hoc 3		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6530535)									
ES2511273-001	Anonymous	EA055: Moisture Content	----	0.1	%	44.1	47.7	7.9	0% - 20%
ES2511346-002	Anonymous	EA055: Moisture Content	----	0.1	%	12.3	11.7	5.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0002	0.0003	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0013	0.0010	23.9	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0218	0.0185	16.4	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530218) - continued									
ES2509386-019	Anonymous	EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0007	0.0006	17.9	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530218) - continued									
ES2511276-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530218)									
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2511276-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	103	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.5	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.3	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.4	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.3	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	97.8	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.6	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.2	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.9	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.1	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.0	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	94.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	102	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	121	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	120	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	108	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.5	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.5	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	91.2	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	106	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	122	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	100	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	90.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	92.8	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	89.9	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	95.5	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	99.0	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	111	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	116	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	94.4	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	97.0	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	104	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	102	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	103	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	108	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	83.0	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	102	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	109	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	111	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	119	69.8	131



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
				Concentration	MS	Low	High
Laboratory sample ID	Sample ID	Method: Compound	CAS Number				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530218) - continued							
ES2509386-019	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	115	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	108	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	118	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	103	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530218)							
ES2509386-019	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	91.4	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	84.2	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	80.1	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	104	69.2	143



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511282	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Ad Hoc 3	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.1	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0908_SS332_250417,	0908_QC100_250417	17-Apr-2025	----	----	----	24-Apr-2025	01-May-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SS332_250417,	0908_QC100_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0908_SS332_250417,	0908_QC100_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0908_SS332_250417,	0908_QC100_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SS332_250417,	0908_QC100_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0908_SS332_250417,	0908_QC100_250417	17-Apr-2025	24-Apr-2025	14-Oct-2025	✓	29-Apr-2025	03-Jun-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

<i>Analytical Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2511282

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.1

C-O-C number : 81784
Site : Ad Hoc 3
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 3
Quote number : ES2024AECOMAU0012
(ES24AECOMAU0012 V3)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 17-Apr-2025 13:37
Client Requested Due : 29-Apr-2025
Date

Issue Date : 23-Apr-2025
Scheduled Reporting Date : 29-Apr-2025

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Not Available
Temperature : 3.5 - Ice present
No. of samples received / analysed : 2 / 2

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2511282-001	17-Apr-2025 09:14	0908_SS332_250417	✓	✓
ES2511282-002	17-Apr-2025 09:14	0908_QC100_250417	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[Redacted]

- [Redacted]

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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
 Phone: [REDACTED]
 ALS Compass COC Reference: 81784 # Samples: Sampler: [REDACTED]
 Phone: [REDACTED]
 Turnaround Requirements: Standard)

LAB OF ORIGIN
NEWCASTLE
Urgent

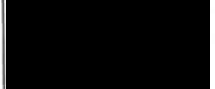
Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact? YES NO N/A
 Free ice / frozen ice bricks upon receipt? YES NO N/A
 Random sample temperature on receipt? 3.5 °C

Custody:

Relinquished by:  Date / Time: <u>1334 17/4/25</u>	Received by:  <u>17/4/25</u> Date / Time: <u>1:37p</u>	Relinquished by:  <u>17/4/25</u> Date / Time: <u>82</u>	Received by:  Date / Time: <u>17/4 1940</u>
--	--	--	--



ALS Laboratory: ES Sydney
Environmental

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908 PFASOMP 25

SITE: Ad Hoc 3

ORDER NO: 60739111 1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3

/ ES2024AECOMAU001
2

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Free ice / frozen ice bricks present upon receipt?

Random Sample Temperature on Receipt:

Other comments:

Yes

No

N/A

☒ Yes

No

N/A

3.5

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 2 - PFAS Full Suite Soil	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SS332_250417		17/04/2025 09:14 AM	SOIL	ALS: 1 Non ALS: 0	No	X		
002	0908_QC100_250417		17/04/2025 09:14 AM	SOIL	ALS: 1 Non ALS: 0	No	X		

Environmental Division
Sydney

Work Order Reference

Work Order Reference
ES2511282



Telephone - 61-2-8784 8556



CHAIN OF CUSTODY

COC#: 81784

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:



DATE TIME:
17/4/25 1940

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Ad Hoc 3

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001
2

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes

No

N/A

Free ice / frozen ice bricks present upon receipt?

Yes

No

N/A

Random Sample Temperature on Receipt:

°C

Other comments:

3-5

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_SS332_250417	HDPE Soil Jar	200 mL	00621024034079	Grey	No	
002	0908_QC100_250417	HDPE Soil Jar	200 mL	00620724032455	Grey	No	

Total Bottle Count: ALS: 2, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2511284**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80530**
Sampler : **[REDACTED]**
Site : **Offsite 6**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 13:12**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW271D_25041 4	0908_MW271S_25041 4	----	----	----
Sampling date / time				14-Apr-2025 14:08	14-Apr-2025 14:12	----	----	----	
Compound	CAS Number	LOR	Unit	ES2511284-001	ES2511284-002	-----	-----	-----	
				Result	Result	----	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.046	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.012	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.037	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.004	0.012	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.02	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.008	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.041	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.003	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.003	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	----	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW271D_25041 4	0908_MW271S_25041 4	----	----	----
Sampling date / time				14-Apr-2025 14:08	14-Apr-2025 14:12	----	----	----
Compound	CAS Number	LOR	Unit	ES2511284-001	ES2511284-002	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.006	0.182	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.006	0.049	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.006	0.150	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	96.9	93.3	----	----	----
13C8-PFOA	----	0.002	%	102	102	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511284	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80530	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 6		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298) - continued									
ES2511271-002	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	83.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	86.8	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	121	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	109	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	87.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	83.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	81.1	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	85.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	109	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	74.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	87.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.3	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.3	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	94.0	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.0	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
						Concentration	LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued									
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	90.3	61.0	135	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)									
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.2	63.0	143	
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	83.6	64.0	140	
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	67.0	138	
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	106	75.2	137	

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	83.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	91.6	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	79.9	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	102	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	106	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	108	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.8	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	85.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	86.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.9	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	110	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	68.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	89.8	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	79.8	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	84.3	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued							
ES2511275-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	108	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	97.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	94.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	88.4	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	88.2	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	96.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	86.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511284	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 6	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.1	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW271D_250414,	0908_MW271S_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW271D_250414,	0908_MW271S_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-LL) 0908_MW271D_250414,	0908_MW271S_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW271D_250414,	0908_MW271S_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-LL) 0908_MW271D_250414,	0908_MW271S_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511284**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80530**
Site : **Offsite 6**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2511284-001	14-Apr-2025 14:08	0908_MW271D_250414	✓
ES2511284-002	14-Apr-2025 14:12	0908_MW271S_250414	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[Redacted]

- [Redacted]

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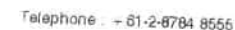
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Custody Document for Submissions via ALS Compass App

Phone:

Phone:

LAB OF O
Urgent



YES NO N/A

YES ☒ NO ☐ N/A ☐

3.5 °C

Received by:

Date / Time:

1774 1940

 CHAIN OF CUSTODY COC#: 80530 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	 DATE TIME: 17/4/25 1940	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 6 ORDER NO: 60739111_1.10.1		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free ice</u> / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: 3.5 °C Other comments:	
PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		CONTACT PH: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012 SAMPLER MOBILE:			

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW271D_250414		14/04/2025 02:08 PM	WATER	ALS: 4 Non ALS: 0	No	X		
002	0908_MW271S_250414		14/04/2025 02:12 PM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2511284



Telephone : + 61-2-8784 8555

 CHAIN OF CUSTODY COC#: 80530 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	17/4/25 1940	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 6 ORDER NO: 60739111_1.10.1		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free</u> ice / frozen ice bricks present upon receipt? Yes No <u>N/A</u> Random Sample Temperature on Receipt: <u>3-5</u> °C Other comments:			
PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW271D_250414	HDPE (no PTFE)	20 mL	00352407181542	Grey	No	
001	0908_MW271D_250414	HDPE (no PTFE)	20 mL	00352407181556	Grey	No	
001	0908_MW271D_250414	HDPE (no PTFE)	20 mL	00352407181832	Grey	No	
001	0908_MW271D_250414	HDPE (no PTFE)	20 mL	00352407181570	Grey	No	
002	0908_MW271S_250414	HDPE (no PTFE)	20 mL	00352407181688	Grey	No	
002	0908_MW271S_250414	HDPE (no PTFE)	20 mL	00352407181721	Grey	No	
002	0908_MW271S_250414	HDPE (no PTFE)	20 mL	00352407181484	Grey	No	
002	0908_MW271S_250414	HDPE (no PTFE)	20 mL	00352407181257	Grey	No	
Total Bottle Count: ALS: 8, Non ALS: 0							



CERTIFICATE OF ANALYSIS

Work Order : **ES2511286**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **80528**
Sampler : **[REDACTED]**
Site : **Offsite 3**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 10:10**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT046_25041
4

Sampling date / time

14-Apr-2025 09:05

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2511286-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.03	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT046_25041
4

Sampling date / time

14-Apr-2025 09:05

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2511286-001

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
(PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
(FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
sulfonamidoacetic acid
(MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
sulfonamidoacetic acid
(EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
(4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
(6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
(8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
(10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

0.03

Sum of PFHxS and PFOS

355-46-4/1763-23-
1

0.01

µg/L

0.03

Sum of PFAS (WA DER List)

0.01

µg/L

0.03

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)			Sample ID	0908_POT046_25041 4	----	----	----	----
Sampling date / time				14-Apr-2025 09:05	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2511286-001	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	111	---	---	---	---
13C8-PFOA	----	0.02	%	94.7	---	---	---	---



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511286	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 80528	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Offsite 3		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.49	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.03	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.08	15.6	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622) - continued									
ES2511271-001	Anonymous	EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622)							
ES2511271-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622) - continued									
ES2511299-005	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.03	0.0	No Limit
ES2511299-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.98	0.94	4.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	90.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	106	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.8	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	103	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.9	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	65.0	136

Matrix Spike (MS) Report

Sub-Matrix: WATER

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	119	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	85.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	110	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	102	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.3	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.0	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	88.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	97.0	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	103	62.9	136
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)					



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622) - continued							
ES2511273-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	112	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	118	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	108	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	117	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	97.9	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	99.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	105	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511286	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Offsite 3	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.1	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: WATER Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_POT046_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_POT046_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_POT046_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_POT046_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_POT046_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✓	29-Apr-2025	11-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511286**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **80528**
Site : **Offsite 3**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield**
NSW Australia 2164

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012**
(ES24AECOMAU0012 V3)
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **1 / 1**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2511286-001	14-Apr-2025 09:05	0908_POT046_250414	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[Redacted]

- [Redacted]

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ES2511286

ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 80528 # Samples: Sampler: [REDACTED]
Phone: [REDACTED] Phone: [REDACTED]

Turnaround Requirements: StandardLAB OF ORIGIN:
NEWCASTLE

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 35 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>1334 17/4/25</u>	Received by: <u>[REDACTED]</u> <u>17/4/25</u> Date / Time: <u>1:37p</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>17/4/25</u> <u>82</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>17/4 1940</u>
--	---	--	---

 CHAIN OF CUSTODY CQC#: 80528 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Offsite 3 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:	LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> Free Ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: °C Other comments:	
CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012		3.5		

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_POT046_250414		14/04/2025 09:05 AM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
 Sydney
 Work Order Reference
ES2511286



Telephone : + 61-2-8784 8555



CHAIN OF CUSTODY

COC#: 80528

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFSOMP_25

SITE: Offsite 3

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3

/ ES2024AECOMAU001
2

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No

N/A

Free ice / frozen ice bricks present upon receipt?

Yes No

N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_POT046_250414	HDPE (no PTFE)	20 mL	00352407186049	Grey	No	
001	0908_POT046_250414	HDPE (no PTFE)	20 mL	00352407185803	Grey	No	
001	0908_POT046_250414	HDPE (no PTFE)	20 mL	00352407181547	Grey	No	
001	0908_POT046_250414	HDPE (no PTFE)	20 mL	00352407181758	Grey	No	

Total Bottle Count: ALS: 4, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2511293**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **81711**
Sampler : **[REDACTED]**
Site : **Ad Hoc 2**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **24-Apr-2025**
Issue Date : **29-Apr-2025 13:12**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW266S_25041
5

Sampling date / time

15-Apr-2025 14:39

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2511293-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.005	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW266S_25041
5

Sampling date / time

15-Apr-2025 14:39

Compound CAS Number LOR Unit

ES2511293-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.005	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.005	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.005	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	93.4	----	----	----	----
13C8-PFOA	----	0.002	%	103	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511293	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 81711	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: Ad Hoc 2		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511299-013	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298) - continued									
ES2511271-002	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	83.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	86.8	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	121	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	109	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	87.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	83.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	81.1	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	85.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	109	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	74.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	87.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.3	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.3	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	94.0	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.0	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
						Concentration	LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued									
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	90.3	61.0	135	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)									
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.2	63.0	143	
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	83.6	64.0	140	
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	67.0	138	
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	106	75.2	137	

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	83.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	91.6	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	79.9	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	102	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	106	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.9	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	108	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.8	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	85.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	86.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.9	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	110	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	68.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	89.8	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	79.8	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	84.3	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298) - continued							
ES2511275-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	108	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	108	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	97.2	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	94.8	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	88.4	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	104	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	88.2	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	96.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	86.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511293	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Ad Hoc 2	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.1	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✓	29-Apr-2025	12-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511293**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **81711**
Site : **Ad Hoc 2**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **1 / 1**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2511293-001	15-Apr-2025 14:39	0908_MW266S_250415	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

- [REDACTED]

Email

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- [REDACTED]

Email

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ES2811293

ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]Phone: [REDACTED]ALS Compass COC Reference: 81711 # Samples: Sampler: [REDACTED]Phone: [REDACTED]Turnaround Requirements: StandardLAB OF ORIGIN:
URGENT
NEWCASTLE

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact? YES NO N/AFree ice / frozen ice bricks upon receipt? YES NO N/ARandom sample temperature on receipt? 3-5 °C

Custody:

Relinquished by:

[REDACTED]

Date / Time:

N/A 1334 17/4/25

Received by:

[REDACTED]

Date / Time:

17/4/25
1:37h

Relinquished by:

[REDACTED]

Date / Time:

17/4/25
5

Received by:

[REDACTED]

Date / Time:

17/4 1940

CHAIN OF CUSTODY COC#: 81711 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: 	RELINQUISHED BY: 	RECEIVED BY: 						
CLIENT: AECOMAU - AECOM Australia Pty Ltd		DATE TIME: 27/4/25 1940	DATE TIME: 	DATE TIME: 						
PROJECT: NSW_0908_PFASOMP_25		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:	LABORATORY USE ONLY (Circle)							
SITE: Ad Hoc 2			Custody Seal intact? Yes No <u>N/A</u>							
ORDER NO: 60739111_1.10.1		Free ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A								
PROJECT MANAGER:		Random Sample Temperature on Receipt: 3.5 °C								
PRIMARY SAMPLER:		Other comments:								
EMAIL REPORTS TO:										
SAMPLE DETAILS							ANALYSIS REQUIRED		Environmental Division Sydney Work Order Reference ES2511293  Telephone - 61-2-9784 8555	
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS		ADDITIONAL INFORMATION
001	0908_MW266S_250415		15/04/2025 02:39 PM	WATER	ALS: 4 Non ALS: 0	No	X			

 CHAIN OF CUSTODY COC#: 81711 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	DATE TIME: 17/4/25 1940	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Ad Hoc 2 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> Free ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: C Other comments: 35			
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW266S_250415	HDPE (no PTFE)	20 mL	00352407185868	Grey	No	
001	0908_MW266S_250415	HDPE (no PTFE)	20 mL	00352407185908	Grey	No	
001	0908_MW266S_250415	HDPE (no PTFE)	20 mL	00352407185772	Grey	No	
001	0908_MW266S_250415	HDPE (no PTFE)	20 mL	00352407185930	Grey	No	
Total Bottle Count: ALS: 4, Non ALS: 0							



CERTIFICATE OF ANALYSIS

Work Order : **ES2511299**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **81499**
Sampler : **[REDACTED]**
Site : **WLM SW and GW**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **17**
No. of samples analysed : **17**

Page : 1 of 19
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61 2 8784 8555
Date Samples Received : 17-Apr-2025 13:37
Date Analysis Commenced : 24-Apr-2025
Issue Date : 29-Apr-2025 17:35



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW240D_25041 6	0908_MW281S_25041 6	0908_MW282S_25041 6	0908_MW329_250416	0908_MW340D_25041 6
Sampling date / time				16-Apr-2025 13:50	16-Apr-2025 14:03	16-Apr-2025 13:55	16-Apr-2025 14:00	16-Apr-2025 14:44
Compound	CAS Number	LOR	Unit	ES2511299-001	ES2511299-002	ES2511299-003	ES2511299-004	ES2511299-005
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.08	0.03	0.06	0.04
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	0.29	0.12	0.19	0.10
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.02	0.24	0.20	0.24	0.07
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.15	2.45	5.11	3.79	0.50
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	3.25	0.51	1.88	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.01	61.4	1.22	32.0	0.08
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.03	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.16	0.05	0.11	0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.05	0.81	0.40	0.72	0.14
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.11	0.14	0.12	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.94	0.54	1.03	0.03
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW240D_25041 6	0908_MW281S_25041 6	0908_MW282S_25041 6	0908_MW329_250416	0908_MW340D_25041 6
Sampling date / time					16-Apr-2025 13:50	16-Apr-2025 14:03	16-Apr-2025 13:55	16-Apr-2025 14:00	16-Apr-2025 14:44
Compound	CAS Number	LOR	Unit		ES2511299-001	ES2511299-002	ES2511299-003	ES2511299-004	ES2511299-005
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		101	97.2	101	102	105
13C8-PFOA	----	0.02	%		98.5	95.3	96.4	94.2	96.4



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW340S_25041 6	0908_MW342D_25041 6	0908_MW344D_25041 6	0908_MW344S_25041 6	0908_MW354S_25041 6
Sampling date / time				16-Apr-2025 14:40	16-Apr-2025 14:22	16-Apr-2025 14:11	16-Apr-2025 14:17	16-Apr-2025 14:31	
Compound	CAS Number	LOR	Unit	ES2511299-006	ES2511299-007	ES2511299-008	ES2511299-009	ES2511299-010	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.03	<0.02	<0.02	0.05	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	0.06	0.04	<0.02	0.21	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.03	0.06	0.04	<0.02	0.49	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.29	0.37	0.83	0.06	9.36	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.03	<0.02	3.51	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.01	0.07	0.46	45.4	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.12	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.05	0.06	0.05	0.02	0.84	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	0.25	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.05	<0.01	1.92	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW340S_25041 6	0908_MW342D_25041 6	0908_MW344D_25041 6	0908_MW344S_25041 6	0908_MW354S_25041 6
Sampling date / time					16-Apr-2025 14:40	16-Apr-2025 14:22	16-Apr-2025 14:11	16-Apr-2025 14:17	16-Apr-2025 14:31
Compound	CAS Number	LOR	Unit	ES2511299-006	ES2511299-007	ES2511299-008	ES2511299-009	ES2511299-010	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%	99.8	97.7	107	103	95.2	
13C8-PFOA	----	0.02	%	91.7	94.5	96.9	94.9	95.5	



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_QC117_250416	0908_QC118_250416	----	----	----
Sampling date / time				16-Apr-2025 13:50	16-Apr-2025 14:11	----	----	----
Compound	CAS Number	LOR	Unit	ES2511299-014	ES2511299-015	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	0.03	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.02	0.04	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.15	0.98	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.03	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.01	0.05	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.04	0.06	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.06	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_QC117_250416	0908_QC118_250416	----	----	----
Sampling date / time					16-Apr-2025 13:50	16-Apr-2025 14:11	----	----	----
Compound	CAS Number	LOR	Unit		ES2511299-014	ES2511299-015	-----	-----	-----
					Result	Result	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L		<0.05	<0.05	----	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		0.24	1.25	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		0.16	1.03	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		0.22	1.18	----	----	----
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_QC117_250416	0908_QC118_250416	----	----	----
Sampling date / time					16-Apr-2025 13:50	16-Apr-2025 14:11	----	----	----
Compound	CAS Number	LOR	Unit		ES2511299-014	ES2511299-015	-----	-----	-----
					Result	Result	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		100	101	----	----	----
13C8-PFOA	----	0.02	%		91.4	96.7	----	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC307_250414	0908_QC308_250415	0908_QC309_250416	0908_QC310_250417	----
Sampling date / time				14-Apr-2025 14:46	15-Apr-2025 15:38	16-Apr-2025 16:04	17-Apr-2025 13:23	----
Compound	CAS Number	LOR	Unit	ES2511299-012	ES2511299-013	ES2511299-016	ES2511299-017	-----
				Result	Result	Result	Result	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	<0.01	<0.01	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	<0.01	<0.01	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	<0.1	<0.1	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	<0.02	<0.02	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC307_250414	0908_QC308_250415	0908_QC309_250416	0908_QC310_250417	----
Sampling date / time				14-Apr-2025 14:46	15-Apr-2025 15:38	16-Apr-2025 16:04	17-Apr-2025 13:23	----
Compound	CAS Number	LOR	Unit	ES2511299-012	ES2511299-013	ES2511299-016	ES2511299-017	-----
				Result	Result	Result	Result	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	<0.01	<0.01	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	<0.02	<0.02	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	<0.05	<0.05	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	----	<0.05	<0.05	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC307_250414	0908_QC308_250415	0908_QC309_250416	0908_QC310_250417	----
Sampling date / time				14-Apr-2025 14:46	15-Apr-2025 15:38	16-Apr-2025 16:04	17-Apr-2025 13:23	----
Compound	CAS Number	LOR	Unit	ES2511299-012	ES2511299-013	ES2511299-016	ES2511299-017	-----
				Result	Result	Result	Result	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	<0.02	<0.02	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	<0.05	<0.05	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	<0.05	<0.05	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	<0.02	<0.02	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	<0.02	<0.02	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

				0908_QC307_250414	0908_QC308_250415	0908_QC309_250416	0908_QC310_250417	----
Sampling date / time				14-Apr-2025 14:46	15-Apr-2025 15:38	16-Apr-2025 16:04	17-Apr-2025 13:23	----
Compound	CAS Number	LOR	Unit	ES2511299-012	ES2511299-013	ES2511299-016	ES2511299-017	-----
				Result	Result	Result	Result	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	<0.05	<0.05	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	<0.05	<0.05	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	<0.05	<0.05	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	<0.05	<0.05	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	<0.002	----	----	----
Sum of PFAS	----	0.01	µg/L	----	----	<0.01	<0.01	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	<0.01	<0.01	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	<0.002	----	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	<0.01	<0.01	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	96.7	98.1	----	----	----
13C4-PFOS	----	0.02	%	----	----	99.8	96.6	----
13C8-PFOA	----	0.002	%	101	99.7	----	----	----
13C8-PFOA	----	0.02	%	----	----	89.5	94.4	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW582_250416

Sampling date / time

16-Apr-2025 09:25

Compound	CAS Number	LOR	Unit	ES2511299-011	-----	-----	-----	-----
				Result	----	----	----	----

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.78	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.07	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	4.92	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.04	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.03	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.12	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.07	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW582_250416

Sampling date / time

16-Apr-2025 09:25

Compound

CAS Number

LOR

Unit

ES2511299-011

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

6.12

Sum of PFHxS and PFOS

355-46-4/1763-23-

0.01

µg/L

5.70

Sum of PFAS (WA DER List)

0.01

µg/L

5.97

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW582_250416	----	----	----	----
				Sampling date / time	16-Apr-2025 09:25	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2511299-011	-----	-----	-----	-----
				Result		----	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		104	----	----	----	----
13C8-PFOA	----	0.02	%		91.7	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: RINSATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2511299	Page	: 1 of 15
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 24-Apr-2025
C-O-C number	: 81499	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]		
Site	: WLM SW and GW		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 17		
No. of samples analysed	: 17		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2511299-005	0908_MW340D_250416	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.50	0.49	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.03	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.10	0.08	15.6	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.07	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.002	0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511271-002	Anonymous	EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	0908_QC308_250415	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6535009)									
ES2510830-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6530622) - continued									
ES2511271-001	Anonymous	EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2511299-005	0908_MW340D_250416	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.14	0.14	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298)							
ES2511271-002	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2511299-013	0908_QC308_250415	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6532298) - continued									
ES2511299-013	0908_QC308_250415	EP231X-LL: Perfluorododecanoic acid (PFDODA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6535009)									
ES2510830-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDODA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	0908_MW340D_250416	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6530622) - continued									
ES2511299-005	0908_MW340D_250416	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	0908_QC308_250415	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6535009)									
ES2510830-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6535009) - continued									
ES2510830-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2511299-005	0908_MW340D_250416	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298)									
ES2511271-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2511299-013	0908_QC308_250415	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit

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 Work Order : ES2511299
 Client : AECOM AUSTRALIA PTY LTD
 Project : NSW_0908_PFASOMP_25



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6532298) - continued									
ES2511299-013	0908_QC308_250415	EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6535009)									
ES2510830-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6530622)									
ES2511271-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	0.03	0.03	0.0	No Limit
ES2511299-005	0908_MW340D_250416	EP231X: Sum of PFAS	----	0.01	µg/L	0.98	0.94	4.2	0% - 20%
EP231P: PFAS Sums (QC Lot: 6535009)									
ES2510830-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	91.3	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	90.9	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	91.9	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	102	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.2	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	97.7	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	106	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	83.8	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	84.2	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	86.8	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	92.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	121	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	109	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.4	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6535009)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	96.1	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	85.4	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	109	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	92.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	109	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	101	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	104	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	117	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	93.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	92.3	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	93.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	91.4	72.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622) - continued								
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	99.8	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	95.3	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.0	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	99.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	90.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	101	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	103	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	91.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	87.8	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	83.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	82.5	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	81.1	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	85.4	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	86.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	109	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	74.5	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	87.4	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	97.3	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6535009)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.5	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	97.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	90.7	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	98.2	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	98.4	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	112	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	120	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	109	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	111	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	109	62.9	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6530622)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	107	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	113	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	97.9	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	102	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.4	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	82.2	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6532298)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	92.3	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	92.8	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	94.0	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	92.0	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	90.3	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6535009)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	114	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	103	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	107	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	96.4	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	110	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	107	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	93.3	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	118	63.0	143



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622) - continued								
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	79.0	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	99.0	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	88.8	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.2	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	83.6	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	92.0	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	106	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6535009)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	121	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	114	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	117	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	110	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	119	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.5	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	85.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	113	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	110	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	108	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	102	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	83.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	91.6	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	79.9	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	102	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	106	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	99.6	65.0	140



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6532298) - continued							
ES2511275-001	Anonymous	EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6535009)							
ES2511299-017	0908_QC310_250417	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	98.5	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	84.3	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	96.4	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	84.1	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	99.3	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	92.3	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	103	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	110	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	92.1	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	100	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	99.3	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.0	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.2	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	93.4	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	100	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	110	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	88.6	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	97.0	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	103	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	108	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.8	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	85.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	86.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	86.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	84.0	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	80.9	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	110	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	68.7	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	89.8	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	79.8	65.6	133
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6535009)					
ES2511299-017	0908_QC310_250417	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	94.6	73.0	129

Matrix Spike (MS) Report

EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6535009)



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6535009) - continued							
ES2511299-017	0908_QC310_250417	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	108	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	127	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	93.9	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	112	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	119	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	100	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6530622)							
ES2511273-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	99.7	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	88.5	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	105	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6532298)							
ES2511275-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	88.2	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	96.8	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	110	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	86.4	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6535009)							
ES2511299-017	0908_QC310_250417	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	100	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	71.6	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	117	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	94.1	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2511299	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: WLM SW and GW	Issue Date	: 29-Apr-2025
Sampler	: [REDACTED]	No. of samples received	: 17
Order number	: 60739111_1.10.1	No. of samples analysed	: 17

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_QC307_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✔	29-Apr-2025	11-Oct-2025	✔	
HDPE (no PTFE) (EP231X-LL) 0908_QC308_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✔	29-Apr-2025	12-Oct-2025	✔	
HDPE (no PTFE) (EP231X) 0908_MW240D_250416, 0908_MW282S_250416, 0908_MW340D_250416, 0908_MW342D_250416, 0908_MW344S_250416, 0908_SW582_250416, 0908_QC118_250416	0908_MW281S_250416, 0908_MW329_250416, 0908_MW340S_250416, 0908_MW344D_250416, 0908_MW354S_250416, 0908_QC117_250416,	16-Apr-2025	24-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC309_250416	16-Apr-2025	28-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔	
HDPE (no PTFE) (EP231X) 0908_QC310_250417	17-Apr-2025	28-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_QC307_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✔	29-Apr-2025	11-Oct-2025	✔	
HDPE (no PTFE) (EP231X-LL) 0908_QC308_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✔	29-Apr-2025	12-Oct-2025	✔	
HDPE (no PTFE) (EP231X) 0908_MW240D_250416, 0908_MW282S_250416, 0908_MW340D_250416, 0908_MW342D_250416, 0908_MW344S_250416, 0908_SW582_250416, 0908_QC118_250416	0908_MW281S_250416, 0908_MW329_250416, 0908_MW340S_250416, 0908_MW344D_250416, 0908_MW354S_250416, 0908_QC117_250416,	16-Apr-2025	24-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC309_250416	16-Apr-2025	28-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔	
HDPE (no PTFE) (EP231X) 0908_QC310_250417	17-Apr-2025	28-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔	



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-LL) 0908_QC307_250414		14-Apr-2025	24-Apr-2025	11-Oct-2025	✔	29-Apr-2025	11-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC308_250415		15-Apr-2025	24-Apr-2025	12-Oct-2025	✔	29-Apr-2025	12-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW240D_250416, 0908_MW281S_250416, 0908_MW282S_250416, 0908_MW329_250416, 0908_MW340D_250416, 0908_MW340S_250416, 0908_MW342D_250416, 0908_MW344D_250416, 0908_MW344S_250416, 0908_MW354S_250416, 0908_SW582_250416, 0908_QC117_250416, 0908_QC118_250416		16-Apr-2025	24-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC309_250416		16-Apr-2025	28-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC310_250417		17-Apr-2025	28-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_QC307_250414		14-Apr-2025	24-Apr-2025	11-Oct-2025	✔	29-Apr-2025	11-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC308_250415		15-Apr-2025	24-Apr-2025	12-Oct-2025	✔	29-Apr-2025	12-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW240D_250416, 0908_MW281S_250416, 0908_MW282S_250416, 0908_MW329_250416, 0908_MW340D_250416, 0908_MW340S_250416, 0908_MW342D_250416, 0908_MW344D_250416, 0908_MW344S_250416, 0908_MW354S_250416, 0908_SW582_250416, 0908_QC117_250416, 0908_QC118_250416		16-Apr-2025	24-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC309_250416		16-Apr-2025	28-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC310_250417		17-Apr-2025	28-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_QC307_250414	14-Apr-2025	24-Apr-2025	11-Oct-2025	✔	29-Apr-2025	11-Oct-2025	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC308_250415	15-Apr-2025	24-Apr-2025	12-Oct-2025	✔	29-Apr-2025	12-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_MW240D_250416, 0908_MW281S_250416, 0908_MW282S_250416, 0908_MW329_250416, 0908_MW340D_250416, 0908_MW340S_250416, 0908_MW342D_250416, 0908_MW344D_250416, 0908_MW344S_250416, 0908_MW354S_250416, 0908_SW582_250416, 0908_QC117_250416, 0908_QC118_250416	16-Apr-2025	24-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC309_250416	16-Apr-2025	28-Apr-2025	13-Oct-2025	✔	29-Apr-2025	13-Oct-2025	✔
HDPE (no PTFE) (EP231X) 0908_QC310_250417	17-Apr-2025	28-Apr-2025	14-Oct-2025	✔	29-Apr-2025	14-Oct-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	11	18.18	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	3	26	11.54	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	26	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	26	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	11	9.09	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	26	7.69	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2511299**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **81499**
Site : **WLM SW and GW**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **29-Apr-2025**
Date

Issue Date : **23-Apr-2025**
Scheduled Reporting Date : **29-Apr-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5 - Ice present**
No. of samples received / analysed : **17 / 17**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2511299-001	16-Apr-2025 13:50	0908_MW240D_250416	✓	
ES2511299-002	16-Apr-2025 14:03	0908_MW281S_250416	✓	
ES2511299-003	16-Apr-2025 13:55	0908_MW282S_250416	✓	
ES2511299-004	16-Apr-2025 14:00	0908_MW329_250416	✓	
ES2511299-005	16-Apr-2025 14:44	0908_MW340D_250416	✓	
ES2511299-006	16-Apr-2025 14:40	0908_MW340S_250416	✓	
ES2511299-007	16-Apr-2025 14:22	0908_MW342D_250416	✓	
ES2511299-008	16-Apr-2025 14:11	0908_MW344D_250416	✓	
ES2511299-009	16-Apr-2025 14:17	0908_MW344S_250416	✓	
ES2511299-010	16-Apr-2025 14:31	0908_MW354S_250416	✓	
ES2511299-011	16-Apr-2025 09:25	0908_SW582_250416	✓	
ES2511299-012	14-Apr-2025 14:46	0908_QC307_250414		✓
ES2511299-013	15-Apr-2025 15:38	0908_QC308_250415		✓
ES2511299-014	16-Apr-2025 13:50	0908_QC117_250416	✓	
ES2511299-015	16-Apr-2025 14:11	0908_QC118_250416	✓	
ES2511299-016	16-Apr-2025 16:04	0908_QC309_250416	✓	
ES2511299-017	17-Apr-2025 13:23	0908_QC310_250417	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

[REDACTED]
- [REDACTED]

Email

[REDACTED]

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Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 81499 # Samples: 17 Phone: [REDACTED]
Turnaround Requirements: Standard Sampler: [REDACTED]
Phone: [REDACTED]

Special Instructions:

LAB OF ORIGIN:
NEWCASTLE

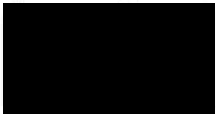
E-MAILED

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3.5 °C

Custody:

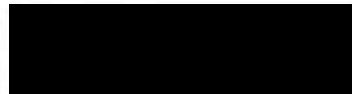
Relinquished by:



Date / Time:

1334 17/4/25

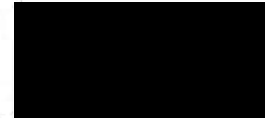
Received by:



Date / Time:

1:37p

Relinquished by:



Date / Time:

Received by:



Date / Time:

17/4 1940

CHAIN OF CUSTODY COC#: 81499 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY:		RELINQUISHED BY:	
		DATE TIME:	17/4/25 1940	DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> Free ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: 35 °C Other comments:	
		CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW240D_250416		16/04/2025 01:50 PM	WATER	ALS: 4 Non ALS: 0	No	X			
002	0908_MW281S_250416		16/04/2025 02:03 PM	WATER	ALS: 4 Non ALS: 0	No	X			
003	0908_MW282S_250416		16/04/2025 01:55 PM	WATER	ALS: 4 Non ALS: 0	No	X			
004	0908_MW329_250416		16/04/2025 02:00 PM	WATER	ALS: 4 Non ALS: 0	No	X			
005	0908_MW340D_250416		16/04/2025 02:44 PM	WATER	ALS: 4 Non ALS: 0	No	X			
006	0908_MW340S_250416		16/04/2025 02:40 PM	WATER	ALS: 4 Non ALS: 0	No	X			
007	0908_MW342D_250416		16/04/2025 02:22 PM	WATER	ALS: 4 Non ALS: 0	No	X			

Environmental Division
 Sydney
 Work Order Reference
ES2511299



Telephone + 61-2-8784 8555

 CHAIN OF CUSTODY COC#: 81499 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	R [REDACTED] DATE TIME: 17/4/25 19:40	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.10.1 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free</u> ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: 3.5 °C Other comments:	
		CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	0908_MW344D_250416		16/04/2025 02:11 PM	WATER	ALS: 4 Non ALS: 0	No	X			
009	0908_MW344S_250416		16/04/2025 02:17 PM	WATER	ALS: 4 Non ALS: 0	No	X			
010	0908_MW354S_250416		16/04/2025 02:31 PM	WATER	ALS: 4 Non ALS: 0	No	X			
011	0908_SW582_250416		16/04/2025 09:25 AM	WATER	ALS: 4 Non ALS: 0	No	X			
012	0908_QC307_250414		14/04/2025 02:46 PM	WATER	ALS: 4 Non ALS: 0	No		X		
013	0908_QC308_250415		15/04/2025 03:38 PM	WATER	ALS: 4 Non ALS: 0	No		X		
014	0908_QC117_250416		16/04/2025 01:50 PM	WATER	ALS: 4 Non ALS: 0	No	X			

**CHAIN OF CUSTODY**
COC#: 81499 ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

17/4/25 1940

RELINQUISHED BY:

DATE TIME:

17/4/25 1940

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd
PROJECT: NSW_0908_PFASOMP_25
SITE: WLM SW and GW
ORDER NO: 60739111_1.10.1
PROJECT MANAGER: [Redacted]
PRIMARY SAMPLER: [Redacted]
EMAIL REPORTS TO: [Redacted]

CONTACT PH: SAMPLER MOBILE:
QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

TURNAROUND REQUIREMENTS: 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)
Custody Seal intact? Yes No N/A
Free ice / frozen ice bricks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: °C
Other comments: 3-5

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 7 - PFAS Full Suite Water WATER	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
015	0908_QC118_250418		16/04/2025 02:11 PM	WATER	ALS: 4 Non ALS: 0	No	X			
016	0908_QC309_250418		16/04/2025 04:04 PM	WATER	ALS: 4 Non ALS: 0	No	X			
017	0908_QC310_250417		17/04/2025 01:23 PM	WATER	ALS: 4 Non ALS: 0	No	X			

 CHAIN OF CUSTODY COC#: 81499 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY:	[REDACTED]		RELINQUISHED BY:	RECEIVED BY:	
		DATE TIME:	DATE TIME: 17/14/25 1940		DATE TIME:	DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.10.1 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]		TURNAROUND REQUIREMENTS: 5 Days		LABORATORY USE ONLY (Circle)			
		Biohazard info:		Custody Seal intact? ☒ Yes ☐ No ☐ N/A Free ice / frozen ice bricks present upon receipt? ☒ Yes ☐ No ☐ N/A Random Sample Temperature on Receipt: 35 °C Other comments:			
		CONTACT PH: SAMPLER MOBILE:		QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW240D_250416	HDPE (no PTFE)	20 mL	00352407181318	Grey	No	
001	0908_MW240D_250416	HDPE (no PTFE)	20 mL	00352407181754	Grey	No	
001	0908_MW240D_250416	HDPE (no PTFE)	20 mL	00352407181505	Grey	No	
001	0908_MW240D_250416	HDPE (no PTFE)	20 mL	00352407181597	Grey	No	
002	0908_MW281S_250416	HDPE (no PTFE)	20 mL	00352407181629	Grey	No	
002	0908_MW281S_250416	HDPE (no PTFE)	20 mL	00352407181512	Grey	No	
002	0908_MW281S_250416	HDPE (no PTFE)	20 mL	00352407185392	Grey	No	
002	0908_MW281S_250416	HDPE (no PTFE)	20 mL	00352407185205	Grey	No	
003	0908_MW282S_250416	HDPE (no PTFE)	20 mL	00352407181297	Grey	No	
003	0908_MW282S_250416	HDPE (no PTFE)	20 mL	00352407181464	Grey	No	
003	0908_MW282S_250416	HDPE (no PTFE)	20 mL	00352407181667	Grey	No	
003	0908_MW282S_250416	HDPE (no PTFE)	20 mL	00352407181338	Grey	No	
004	0908_MW329_250416	HDPE (no PTFE)	20 mL	00352407181295	Grey	No	
004	0908_MW329_250416	HDPE (no PTFE)	20 mL	00352407181309	Grey	No	
004	0908_MW329_250416	HDPE (no PTFE)	20 mL	00352407181313	Grey	No	
004	0908_MW329_250416	HDPE (no PTFE)	20 mL	00352407181641	Grey	No	
005	0908_MW340D_250416	HDPE (no PTFE)	20 mL	00352407181543	Grey	No	
005	0908_MW340D_250416	HDPE (no PTFE)	20 mL	00352407181456	Grey	No	
005	0908_MW340D_250416	HDPE (no PTFE)	20 mL	00352407181392	Grey	No	
005	0908_MW340D_250416	HDPE (no PTFE)	20 mL	00352407181471	Grey	No	
006	0908_MW340S_250416	HDPE (no PTFE)	20 mL	00352407181738	Grey	No	
006	0908_MW340S_250416	HDPE (no PTFE)	20 mL	00352407181697	Grey	No	
006	0908_MW340S_250416	HDPE (no PTFE)	20 mL	00352407181713	Grey	No	
006	0908_MW340S_250416	HDPE (no PTFE)	20 mL	00352407181765	Grey	No	
007	0908_MW342D_250416	HDPE (no PTFE)	20 mL	00352407185319	Grey	No	
007	0908_MW342D_250416	HDPE (no PTFE)	20 mL	00352407185209	Grey	No	

CHAIN OF CUSTODY COC#: 81499 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY:		RELINQUISHED BY:	
		DATE TIME:	17/14/25 19:40	DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free</u> ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: 35 °C Other comments:	
		CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			

007	0908_MW342D_250416	HDPE (no PTFE)	20 mL	00352407181610	Grey	No	
007	0908_MW342D_250416	HDPE (no PTFE)	20 mL	00352407181816	Grey	No	
008	0908_MW344D_250416	HDPE (no PTFE)	20 mL	00352407185985	Grey	No	
008	0908_MW344D_250416	HDPE (no PTFE)	20 mL	00352407185195	Grey	No	
008	0908_MW344D_250416	HDPE (no PTFE)	20 mL	00352407185288	Grey	No	
008	0908_MW344D_250416	HDPE (no PTFE)	20 mL	00352407185944	Grey	No	
009	0908_MW344S_250416	HDPE (no PTFE)	20 mL	00352407185859	Grey	No	
009	0908_MW344S_250416	HDPE (no PTFE)	20 mL	00352407185948	Grey	No	
009	0908_MW344S_250416	HDPE (no PTFE)	20 mL	00352407185936	Grey	No	
009	0908_MW344S_250416	HDPE (no PTFE)	20 mL	00352407185763	Grey	No	
010	0908_MW354S_250416	HDPE (no PTFE)	20 mL	00352407181545	Grey	No	
010	0908_MW354S_250416	HDPE (no PTFE)	20 mL	00352407185842	Grey	No	
010	0908_MW354S_250416	HDPE (no PTFE)	20 mL	00352407185988	Grey	No	
010	0908_MW354S_250416	HDPE (no PTFE)	20 mL	00352407181531	Grey	No	
011	0908_SW582_250416	HDPE (no PTFE)	20 mL	00352407181811	Grey	No	
011	0908_SW582_250416	HDPE (no PTFE)	20 mL	00352407181699	Grey	No	
011	0908_SW582_250416	HDPE (no PTFE)	20 mL	00352407181608	Grey	No	
011	0908_SW582_250416	HDPE (no PTFE)	20 mL	00352407181454	Grey	No	
012	0908_QC307_250414	HDPE (no PTFE)	20 mL	00352407181757	Grey	No	
012	0908_QC307_250414	HDPE (no PTFE)	20 mL	00352407181737	Grey	No	
012	0908_QC307_250414	HDPE (no PTFE)	20 mL	00352407181274	Grey	No	
012	0908_QC307_250414	HDPE (no PTFE)	20 mL	00352407181300	Grey	No	
013	0908_QC308_250415	HDPE (no PTFE)	20 mL	00352407185898	Grey	No	
013	0908_QC308_250415	HDPE (no PTFE)	20 mL	00352407185386	Grey	No	
013	0908_QC308_250415	HDPE (no PTFE)	20 mL	00352407185951	Grey	No	
013	0908_QC308_250415	HDPE (no PTFE)	20 mL	00352407185225	Grey	No	
014	0908_QC117_250416	HDPE (no PTFE)	20 mL	00352407181718	Grey	No	

CHAIN OF CUSTODY COC#: 81499 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	DATE TIME: 17/4/25 1940	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: WLM SW and GW ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:	LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No ☒ N/A ☒ Free ice / frozen ice bricks present upon receipt? ☒ Yes No N/A Random Sample Temperature on Receipt: Other comments: 35 -C				
CONTACT PH: SAMPLER MOBILE: QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012							
014	0908_QC117_250416	HDPE (no PTFE)	20 mL	00352407181689	Grey	No	
014	0908_QC117_250416	HDPE (no PTFE)	20 mL	00352407181402	Grey	No	
014	0908_QC117_250416	HDPE (no PTFE)	20 mL	00352407181273	Grey	No	
015	0908_QC118_250416	HDPE (no PTFE)	20 mL	00352407181843	Grey	No	
015	0908_QC118_250416	HDPE (no PTFE)	20 mL	00352407181850	Grey	No	
015	0908_QC118_250416	HDPE (no PTFE)	20 mL	00352407185753	Grey	No	
015	0908_QC118_250416	HDPE (no PTFE)	20 mL	00352407185854	Grey	No	
016	0908_QC309_250416	HDPE (no PTFE)	20 mL	00352407181778	Grey	No	
016	0908_QC309_250416	HDPE (no PTFE)	20 mL	00352407181493	Grey	No	
016	0908_QC309_250416	HDPE (no PTFE)	20 mL	00352407181583	Grey	No	
016	0908_QC309_250416	HDPE (no PTFE)	20 mL	00352407181444	Grey	No	
017	0908_QC310_250417	HDPE (no PTFE)	20 mL	00352407181388	Grey	No	
017	0908_QC310_250417	HDPE (no PTFE)	20 mL	00352407181289	Grey	No	
017	0908_QC310_250417	HDPE (no PTFE)	20 mL	00352407181523	Grey	No	
017	0908_QC310_250417	HDPE (no PTFE)	20 mL	00352407181334	Grey	No	
Total Bottle Count: ALS: 68, Non ALS: 0							



CERTIFICATE OF ANALYSIS

Work Order : **ES2513709**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**
C-O-C number : **----**
Sampler : **[REDACTED]**
Site : **Williamtown**
Quote number : **ES24AECOMAU0012 V3**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **17-Apr-2025 13:37**
Date Analysis Commenced : **12-May-2025**
Issue Date : **13-May-2025 15:02**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0908_MW231S_25041
7

Sampling date / time

17-Apr-2025 00:00

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2513709-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.02	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.07	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0908_MW231S_25041
7

Sampling date / time

17-Apr-2025 00:00

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2513709-001

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
(PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
(FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
sulfonamidoacetic acid
(MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
sulfonamidoacetic acid
(EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
(4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
(6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
(8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
(10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

0.09

Sum of PFHxS and PFOS

355-46-4/1763-23-1

0.01

µg/L

0.09

Sum of PFAS (WA DER List)

0.01

µg/L

0.09

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Sample ID	0908_MW231S_25041 7	----	----	----	----
Sampling date / time				17-Apr-2025 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2513709-001	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	102	---	---	---	---
13C8-PFOA	----	0.02	%	99.7	---	---	---	---



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2513709	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Order number	: 60739111_1.10.1	Date Analysis Commenced	: 12-May-2025
C-O-C number	: ----	Issue Date	: 13-May-2025
Sampler	: [REDACTED]		
Site	: Williamtown		
Quote number	: ES24AECOMAU0012 V3		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

- **No Laboratory Duplicate (DUP) Results are required to be reported.**



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6568328)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	106	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	81.0	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	96.4	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	99.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	99.1	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	92.9	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	94.1	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6568328)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	82.6	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	94.7	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	92.4	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	81.5	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	100	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	102	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	95.1	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	97.8	72.0	134
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	87.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	82.0	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	93.3	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6568328)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	110	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	131	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	107	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	88.5	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	107	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	84.0	65.0	136



Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6568328) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	100	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6568328)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	78.6	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	85.1	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	96.1	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	93.2	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2513709	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 17-Apr-2025
Site	: Williamtown	Issue Date	: 13-May-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.1	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.



Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_MW231S_250417	17-Apr-2025	12-May-2025	14-Oct-2025	✓	13-May-2025	14-Oct-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_MW231S_250417	17-Apr-2025	12-May-2025	14-Oct-2025	✓	13-May-2025	14-Oct-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_MW231S_250417	17-Apr-2025	12-May-2025	14-Oct-2025	✓	13-May-2025	14-Oct-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_MW231S_250417	17-Apr-2025	12-May-2025	14-Oct-2025	✓	13-May-2025	14-Oct-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_MW231S_250417	17-Apr-2025	12-May-2025	14-Oct-2025	✓	13-May-2025	14-Oct-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	0	1	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2513709**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.1**

C-O-C number : **----**
Site : **Williamtown**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012
(ES24AECOMAU0012 V3)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **17-Apr-2025 13:37**
Client Requested Due : **19-May-2025**
Date

Issue Date : **12-May-2025**
Scheduled Reporting Date : **19-May-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.5°C - Ice present**
No. of samples received / analysed : **1 / 1**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Rebatch of ES2511279.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2513709-001	17-Apr-2025 00:00	0908_MW231S_250417	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

- [REDACTED]

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REBATCH REQUEST

[illegible]

12/5/25 1621



CERTIFICATE OF ANALYSIS

Work Order : **ES2515729**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111 1.12**
C-O-C number : **83342**
Sampler : **[REDACTED]**
Site : **Offsite 1**
Quote number : **[REDACTED]**
No. of samples received : **3**
No. of samples analysed : **3**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 28-May-2025 15:30
Date Analysis Commenced : 30-May-2025
Issue Date : 05-Jun-2025 14:47



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW144_250527	0908_MW536_250527	0908_MW537_250527	----	----
Sampling date / time				27-May-2025 09:30	27-May-2025 09:00	27-May-2025 09:15	----	----	
Compound	CAS Number	LOR	Unit	ES2515729-001	ES2515729-002	ES2515729-003	-----	-----	
				Result	Result	Result	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.002	<0.002	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.017	0.014	0.011	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.069	0.038	0.012	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	----	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.006	<0.002	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	----	----	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW144_250527	0908_MW536_250527	0908_MW537_250527	----	----
Sampling date / time				27-May-2025 09:30	27-May-2025 09:00	27-May-2025 09:15	----	----
Compound	CAS Number	LOR	Unit	ES2515729-001	ES2515729-002	ES2515729-003	-----	-----
Result				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.086	0.060	0.023	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.086	0.052	0.023	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.086	0.052	0.023	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	111	100	102	----	----
13C8-PFOA	----	0.002	%	98.6	97.2	99.7	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : ES2515729

Page : 1 of 7

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111 1.12

C-O-C number : 83342

Sampler : [REDACTED]

Site : Offsite 1

Quote number : [REDACTED]

No. of samples received : 3

No. of samples analysed : 3

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : 28-May-2025

Date Analysis Commenced : 30-May-2025

Issue Date : 05-Jun-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	0908_MW144_250527	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.017	0.018	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.003	41.4	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.069	0.064	7.1	0% - 20%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861) - continued									
ES2515837-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6613861)									
ES2515729-001	0908_MW144_250527	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861)									
ES2515729-001	0908_MW144_250527	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861) - continued									
ES2515729-001	0908_MW144_250527	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	0908_MW144_250527	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	101	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.8	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	115	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	84.6	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	112	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	96.7	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	86.0	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	110	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	118	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	107	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	102	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	113	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	99.4	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	117	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	77.8	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	82.6	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	107	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	106	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	102	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	101	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	121	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	114	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.8	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.0	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	95.6	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	93.3	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	0908_MW537_250527	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	111	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	92.8	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	101	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	71.9	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	105	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	100	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)							
ES2515729-003	0908_MW537_250527	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	116	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	114	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	106	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	112	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	103	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	96.1	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	113	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	99.3	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	109	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	98.2	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	92.7	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	91.4	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)							
ES2515729-003	0908_MW537_250527	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	94.2	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued							
ES2515729-003	0908_MW537_250527	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	80.3	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	100	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	106	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	109	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	97.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	0908_MW537_250527	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	85.4	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	90.2	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	101	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	114	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2515729	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 28-May-2025
Site	: Offsite 1	Issue Date	: 05-Jun-2025
Sampler	: [REDACTED]	No. of samples received	: 3
Order number	: 60739111 1.12	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW144_250527, 0908_MW537_250527	0908_MW536_250527,	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW144_250527, 0908_MW537_250527	0908_MW536_250527,	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-LL) 0908_MW144_250527, 0908_MW537_250527	0908_MW536_250527,	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW144_250527, 0908_MW537_250527	0908_MW536_250527,	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-LL) 0908_MW144_250527, 0908_MW537_250527	0908_MW536_250527,	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2515729

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111 1.12

C-O-C number : 83342

Site : Offsite 1

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : +61-2-8784 8500

Page : 1 of 3

Quote number : ES2024AECOMAU0012

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 28-May-2025 15:30

Client Requested Due : 04-Jun-2025

Date

Issue Date : 30-May-2025

Scheduled Reporting Date : 04-Jun-2025

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : 1

Receipt Detail :

Security Seal : Not Available

Temperature : 1.0°C - Ice present

No. of samples received / analysed : 3 / 3

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **30/05/25: This is an updated SRN which indicates the new order number.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2515729-001	27-May-2025 09:30	0908_MW144_250527	✓
ES2515729-002	27-May-2025 09:00	0908_MW536_250527	✓
ES2515729-003	27-May-2025 09:15	0908_MW537_250527	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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CHAIN OF CUSTODY COC#: 83342 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: 		RELINQUISHED BY: 		RECEIVED BY: 			
CLIENT: AECOMAU - AECOM Australia Pty Ltd		DATE TIME: 28/05/2025 19:30		DATE TIME:		DATE TIME:			
PROJECT: NSW_0908_PFASOMP_25		TURNAROUND REQUIREMENTS: 5 Days		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free</u> ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: 1.0 °C Other comments:					
SITE: Offsite 1		Biohazard info:							
ORDER NO: 60739111_1.10.1									
PROJECT MANAGER:		CONTACT PH:		SAMPLER MOBILE:					
PRIMARY SAMPLER:		QUOTE NO: ES24AECOMAU0012 V3		/ ES2024AECOMAU0012					
EMAIL REPORTS TO:									
SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW144_250527		27/05/2025 09:30 AM	WATER	ALS: 4 Non ALS: 0	No	X		
002	0908_MW536_250527		27/05/2025 09:00 AM	WATER	ALS: 4 Non ALS: 0	No	X		
003	0908_MW537_250527		27/05/2025 09:15 AM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2515729



Telephone : + 61-2-8784 8556

CHAIN OF CUSTODY COC#: 83342 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	 28/5/25 1930	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Offsite 1 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: 17.0 °C Other comments:			
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW144_250527	HDPE (no PTFE)	20 mL	00352407181642	Grey	No	
001	0908_MW144_250527	HDPE (no PTFE)	20 mL	00352407181644	Grey	No	
001	0908_MW144_250527	HDPE (no PTFE)	20 mL	00352407181266	Grey	No	
001	0908_MW144_250527	HDPE (no PTFE)	20 mL	00352407181385	Grey	No	
002	0908_MW536_250527	HDPE (no PTFE)	20 mL	00352407181533	Grey	No	
002	0908_MW536_250527	HDPE (no PTFE)	20 mL	00352407181792	Grey	No	
002	0908_MW536_250527	HDPE (no PTFE)	20 mL	00352407181633	Grey	No	
002	0908_MW536_250527	HDPE (no PTFE)	20 mL	00352407181340	Grey	No	
003	0908_MW537_250527	HDPE (no PTFE)	20 mL	00352407181491	Grey	No	
003	0908_MW537_250527	HDPE (no PTFE)	20 mL	00352407181353	Grey	No	
003	0908_MW537_250527	HDPE (no PTFE)	20 mL	00352407181595	Grey	No	
003	0908_MW537_250527	HDPE (no PTFE)	20 mL	00352407181256	Grey	No	
Total Bottle Count: ALS: 12, Non ALS: 0							



Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: _____
 Phone: (_____)
 ALS Compass COC Reference: 83342 # Samples: _____ Sampler: _____
 Phone: (_____)

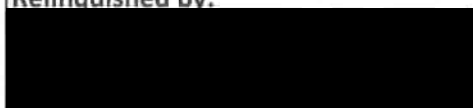
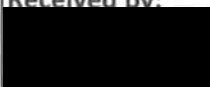
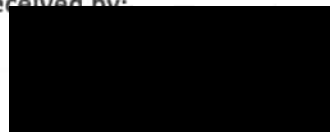
Turnaround Requirements: Standard _____ Urgent _____

Special Instructions:

ALS Use Only

Custody seal intact? YES NO N/A
 Free ice / frozen ice bricks upon receipt? YES NO N/A
 Random sample temperature on receipt? 1.0 °C

Custody:

Relinquished by: 	Received by: 	Relinquished by: 	Received by: 
Date / Time: <u>28/5/25 1520</u>	Date / Time: <u>1530</u> <u>28.05.25</u>	Date / Time: <u>1700</u> <u>28.05.25</u>	Date / Time: <u>28/5/25 1930</u>



CERTIFICATE OF ANALYSIS

Work Order : **ES2515730**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111 1.12**
C-O-C number : **83343**
Sampler : **[REDACTED]**
Site : **Offsite 2**
Quote number : **[REDACTED]**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 28-May-2025 15:30
Date Analysis Commenced : 30-May-2025
Issue Date : 05-Jun-2025 14:49



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT365_25052
6

Sampling date / time

26-May-2025 10:10

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2515730-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT365_25052
6

Sampling date / time

26-May-2025 10:10

Compound CAS Number LOR Unit

ES2515730-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	102	----	----	----	----
13C8-PFOA	----	0.002	%	98.3	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : ES2515730

Page : 1 of 7

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111 1.12

C-O-C number : 83343

Sampler : [REDACTED]

Site : Offsite 2

Quote number : [REDACTED]

No. of samples received : 1

No. of samples analysed : 1

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : 28-May-2025

Date Analysis Commenced : 30-May-2025

Issue Date : 05-Jun-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.017	0.018	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.003	41.4	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.069	0.064	7.1	0% - 20%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861) - continued									
ES2515837-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861) - continued									
ES2515729-001	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	101	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.8	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	115	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	84.6	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	112	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	96.7	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	86.0	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	110	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	118	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	107	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	102	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	113	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	99.4	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	117	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	77.8	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	82.6	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	107	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	106	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	102	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	101	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	121	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	114	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.8	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.0	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	95.6	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	93.3	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	111	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	92.8	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	101	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	71.9	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	105	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	100	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	116	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	114	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	106	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	112	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	103	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	96.1	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	113	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	99.3	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	109	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	98.2	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	92.7	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	91.4	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	94.2	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued							
ES2515729-003	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	80.3	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	100	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	106	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	109	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	97.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	85.4	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	90.2	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	101	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	114	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2515730	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 28-May-2025
Site	: Offsite 2	Issue Date	: 05-Jun-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111 1.12	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_250526	26-May-2025	30-May-2025	22-Nov-2025	✓	04-Jun-2025	22-Nov-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_250526	26-May-2025	30-May-2025	22-Nov-2025	✓	04-Jun-2025	22-Nov-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_250526	26-May-2025	30-May-2025	22-Nov-2025	✓	04-Jun-2025	22-Nov-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_250526	26-May-2025	30-May-2025	22-Nov-2025	✓	04-Jun-2025	22-Nov-2025	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_250526	26-May-2025	30-May-2025	22-Nov-2025	✓	04-Jun-2025	22-Nov-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2515730

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111 1.12

C-O-C number : 83343

Site : Offsite 2

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : +61-2-8784 8500

Page : 1 of 3

Quote number : ES2024AECOMAU0012

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 28-May-2025 15:30

Client Requested Due : 04-Jun-2025

Date

Issue Date : 30-May-2025

Scheduled Reporting Date : 04-Jun-2025

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : 1

Receipt Detail :

Security Seal : Not Available

Temperature : 1.0°C - Ice present

No. of samples received / analysed : 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- 30/05/25: This is an updated SRN which indicates the new order number.
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2515730-001	26-May-2025 10:10	0908_POT365_250526	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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CHAIN OF CUSTODY

COC#: 83343

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

DATE TIME:

1930

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 2

ORDER NO: 60739111_1.10.1

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_POT365_250526		26/05/2025 10:10 AM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2515730



Telephone : +61-2-8784 8555

 CHAIN OF CUSTODY COC#: 83343 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	 DATE TIME: 1930 28/5/25	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Offsite 2 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free</u> ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: °C Other comments: 1.0			
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_POT365_250526	HDPE (no PTFE)	20 mL	00352407181734	Grey	No	
001	0908_POT365_250526	HDPE (no PTFE)	20 mL	00352407181764	Grey	No	
001	0908_POT365_250526	HDPE (no PTFE)	20 mL	00352407181390	Grey	No	
001	0908_POT365_250526	HDPE (no PTFE)	20 mL	00352407181264	Grey	No	
Total Bottle Count: ALS: 4, Non ALS: 0							

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: _____
ALS Compass COC Reference: 83343 # Samples: _____
Phone: (_____) _____
Sampler: _____
Phone: (_____) _____

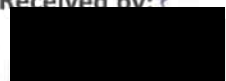
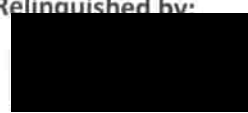
Turnaround Requirements: Standard _____ Urgent _____

Special Instructions:

ALS Use Only

Custody seal intact?	YES	NO	N/A
Free ice / frozen ice bricks upon receipt?	<u>YES</u>	NO	N/A
Random sample temperature on receipt?	1.0	°C	

Custody:

Relinquished by: 	Received by: 	Relinquished by: 	Received by: 
Date / Time: <u>28/5/25 1520</u>	Date / Time: <u>1530</u> <u>28-05-25</u>	Date / Time: <u>1700</u> <u>28-05-25</u>	Date / Time: <u>28/5/25 1950</u>



CERTIFICATE OF ANALYSIS

Work Order : **ES2515731**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111 1.12**
C-O-C number : **83345**
Sampler : **[REDACTED]**
Site : **Williamtown GW**
Quote number : **[REDACTED]**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 7
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 28-May-2025 15:30
Date Analysis Commenced : 30-May-2025
Issue Date : 05-Jun-2025 14:47



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW162D_25052
7

Sampling date / time

27-May-2025 11:19

Compound	CAS Number	LOR	Unit	Result				
				ES2515731-001	-----	-----	-----	-----
				Result	----	----	----	----

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.005	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW162D_25052
7

Sampling date / time

27-May-2025 11:19

Compound CAS Number LOR Unit

ES2515731-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.005	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.005	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.005	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	104	----	----	----	----
13C8-PFOA	----	0.002	%	97.6	----	----	----	----



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

0908_QC300_250527

Sampling date / time

27-May-2025 17:10

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2515731-002

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: RINSATE
 (Matrix: WATER)

Sample ID

0908_QC300_250527

Sampling date / time

27-May-2025 17:10

Compound

CAS Number

LOR

Unit

ES2515731-002

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	115	----	----	----	----
13C8-PFOA	----	0.002	%	110	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: RINSATE		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : ES2515731

Page : 1 of 7

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111 1.12

C-O-C number : 83345

Sampler : [REDACTED]

Site : Wiliamtown GW

Quote number : [REDACTED]

No. of samples received : 2

No. of samples analysed : 2

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : 28-May-2025

Date Analysis Commenced : 30-May-2025

Issue Date : 05-Jun-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.017	0.018	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.003	41.4	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.069	0.064	7.1	0% - 20%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861) - continued									
ES2515837-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861) - continued									
ES2515729-001	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	101	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.8	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	115	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	84.6	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	112	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	96.7	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	86.0	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	110	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	118	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	107	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	102	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	113	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	99.4	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	117	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	77.8	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	82.6	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	107	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	106	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	102	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	101	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	121	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	136



Sub-Matrix: **WATER**

Method: Compound				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
						LCS	Low	High
CAS Number	LOR	Unit	Result					
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	114	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.8	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.0	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	95.6	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	93.3	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	111	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	92.8	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	101	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	71.9	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	105	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	100	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	116	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	114	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	106	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	112	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	103	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	96.1	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	113	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	99.3	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	109	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	98.2	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	92.7	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	91.4	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	94.2	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued							
ES2515729-003	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	80.3	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	100	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	106	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	109	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	97.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	85.4	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	90.2	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	101	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	114	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2515731	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 28-May-2025
Site	: Wiliamtown GW	Issue Date	: 05-Jun-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111 1.12	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW162D_250527,		0908_QC300_250527	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW162D_250527,		0908_QC300_250527	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231C: Perfluoroalkyl Sulfonamides									
HDPE (no PTFE) (EP231X-LL) 0908_MW162D_250527,		0908_QC300_250527	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW162D_250527,		0908_QC300_250527	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231P: PFAS Sums									
HDPE (no PTFE) (EP231X-LL) 0908_MW162D_250527,		0908_QC300_250527	27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2515731**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : **NSW_0908_PFASOMP_25**

Order number : **60739111 1.12**

C-O-C number : **83345**

Site : **Williamstown GW**

Sampler : [REDACTED]

Laboratory : **Environmental Division Sydney**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : **+61-2-8784 8500**

Page : **1 of 3**

Quote number : **ES2024AECOMAU0012**

[REDACTED]

QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **28-May-2025 15:30**

Client Requested Due : **04-Jun-2025**

Date

Issue Date : **30-May-2025**

Scheduled Reporting Date : **04-Jun-2025**

Delivery Details

Mode of Delivery : **Undefined**

No. of coolers/boxes : **1**

Receipt Detail :

Security Seal : **Not Available**

Temperature : **1.0°C - Ice present**

No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **30/05/25: This is an updated SRN which indicates the new order number.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2515731-001	27-May-2025 11:19	0908_MW162D_250527	✓
ES2515731-002	27-May-2025 17:10	0908_QC300_250527	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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CHAIN OF CUSTODY COC#: 83345 ALS Laboratory: ES Sydney Environmental			RELINQUISHED BY: DATE TIME:		[Redacted] 29/5/25/1930		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Wiliamtown GW ORDER NO: 60739111_1.10.1			TURNAROUND REQUIREMENTS : 5 Days Biohazard info:			LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> Free ice / frozen ice bricks present upon receipt? <u>Yes</u> Yes No <u>N/A</u> Random Sample Temperature on Receipt: <u>1.0</u> °C Other comments:				
PROJECT MANAGER: [Redacted] PRIMARY SAMPLER: [Redacted] EMAIL REPORTS TO: [Redacted]			CONTACT PH: [Redacted] SAMPLER MOBILE: [Redacted] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012							
SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION	
001	0908_MW162D_250527		27/05/2025 11:19 AM	WATER	ALS: 4 Non ALS: 0	No	X			
002	0908_QC300_250527		27/05/2025 05:10 PM	WATER	ALS: 4 Non ALS: 0	No	X			

Environmental Division
Sydney
Work Order Reference
ES2515731

Telephone +61-2-8784 8556

CHAIN OF CUSTODY COC#: 83345 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	29/5/25/930	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:																																																																								
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Williamtown GW ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:	LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free</u> ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: <u>10</u> °C Other comments:																																																																										
QUOTE NO: ES24AECOMAU0012 V3	CONTACT PH: SAMPLER MOBILE:		ES2024AECOMAU0012																																																																										
<table><thead><tr><th>SAMPLE</th><th>SAMPLE NAME</th><th>BOTTLE NAME</th><th>VOLUME</th><th>BARCODE</th><th>TYPE</th><th>FILTERED</th><th>REASON</th></tr></thead><tbody><tr><td>001</td><td>0908_MW162D_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407181526</td><td>Grey</td><td>No</td><td></td></tr><tr><td>001</td><td>0908_MW162D_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407185920</td><td>Grey</td><td>No</td><td></td></tr><tr><td>001</td><td>0908_MW162D_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407181254</td><td>Grey</td><td>No</td><td></td></tr><tr><td>001</td><td>0908_MW162D_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407186024</td><td>Grey</td><td>No</td><td></td></tr><tr><td>002</td><td>0908_QC300_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407185945</td><td>Grey</td><td>No</td><td></td></tr><tr><td>002</td><td>0908_QC300_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407185977</td><td>Grey</td><td>No</td><td></td></tr><tr><td>002</td><td>0908_QC300_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407181540</td><td>Grey</td><td>No</td><td></td></tr><tr><td>002</td><td>0908_QC300_250527</td><td>HDPE (no PTFE)</td><td>20 mL</td><td>00352407181557</td><td>Grey</td><td>No</td><td></td></tr></tbody></table>						SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON	001	0908_MW162D_250527	HDPE (no PTFE)	20 mL	00352407181526	Grey	No		001	0908_MW162D_250527	HDPE (no PTFE)	20 mL	00352407185920	Grey	No		001	0908_MW162D_250527	HDPE (no PTFE)	20 mL	00352407181254	Grey	No		001	0908_MW162D_250527	HDPE (no PTFE)	20 mL	00352407186024	Grey	No		002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407185945	Grey	No		002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407185977	Grey	No		002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407181540	Grey	No		002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407181557	Grey	No	
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON																																																																						
001	0908_MW162D_250527	HDPE (no PTFE)	20 mL	00352407181526	Grey	No																																																																							
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001	0908_MW162D_250527	HDPE (no PTFE)	20 mL	00352407181254	Grey	No																																																																							
001	0908_MW162D_250527	HDPE (no PTFE)	20 mL	00352407186024	Grey	No																																																																							
002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407185945	Grey	No																																																																							
002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407185977	Grey	No																																																																							
002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407181540	Grey	No																																																																							
002	0908_QC300_250527	HDPE (no PTFE)	20 mL	00352407181557	Grey	No																																																																							
Total Bottle Count: ALS: 8, Non ALS: 0																																																																													

ES2515731

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECom Project Manager: _____
ALS Compass COC Reference: 83345 # Samples: _____ Sampler: _____
Phone: _____ Phone: _____

Turnaround Requirements: Standard _____ Urgent _____

Special Instructions:

ALS Use Only

Custody seal intact? YES NO N/A

Free ice / frozen ice bricks upon receipt? YES NO N/A

Random sample temperature on receipt? 1.0 °C

Custody:

Relinquished by: [Redacted]	Received by: [Redacted]	Relinquished by: [Redacted]	Received by: [Redacted]
Date / Time: 28/5/25 1520	Date / Time: 1530 28.05.25	Date / Time: 1700 28/05	Date / Time: 28/5/25 1930



CERTIFICATE OF ANALYSIS

Work Order : **ES2515837**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111 1.12**
C-O-C number : **83344**
Sampler : **[REDACTED]**
Site : **Offsite 3**
Quote number : **[REDACTED]**
No. of samples received : **2**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 28-May-2025 15:30
Date Analysis Commenced : 30-May-2025
Issue Date : 05-Jun-2025 14:47



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT303_25052
7

Sampling date / time

27-May-2025 10:22

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2515837-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT303_25052
7

Sampling date / time

27-May-2025 10:22

Compound CAS Number LOR Unit

ES2515837-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	100	----	----	----	----
13C8-PFOA	----	0.002	%	101	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2515837**

Page : 1 of 7

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : [REDACTED]

Telephone : ----

Project : **NSW_0908_PFASOMP_25**

Order number : **60739111 1.12**

C-O-C number : **83344**

Sampler : [REDACTED]

Site : **Offsite 3**

Quote number : [REDACTED]

No. of samples received : **2**

No. of samples analysed : **1**

Laboratory : **Environmental Division Sydney**

Contact : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : **28-May-2025**

Date Analysis Commenced : **30-May-2025**

Issue Date : **05-Jun-2025**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.017	0.018	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.003	41.4	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.069	0.064	7.1	0% - 20%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	0908_POT303_250527	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6613861) - continued									
ES2515837-001	0908_POT303_250527	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2515837-001	0908_POT303_250527	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6613861) - continued									
ES2515729-001	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	0908_POT303_250527	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6613861)									
ES2515729-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2515837-001	0908_POT303_250527	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	101	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.8	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	115	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	84.6	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	112	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	96.7	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	86.0	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	110	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	118	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	107	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	102	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	113	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	99.4	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	117	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	77.8	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	82.6	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	107	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	106	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	102	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	101	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	121	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	114	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.8	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.0	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	95.6	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	93.3	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	111	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	92.8	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	101	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	71.9	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	105	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	100	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	116	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	114	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	106	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	112	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	103	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	96.1	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	113	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	99.3	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	109	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	98.2	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	92.7	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	91.4	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	94.2	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6613861) - continued							
ES2515729-003	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	80.3	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	100	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	106	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	109	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	97.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6613861)							
ES2515729-003	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	85.4	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	90.2	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	101	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	114	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2515837	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 28-May-2025
Site	: Offsite 3	Issue Date	: 05-Jun-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111 1.12	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_POT303_250527		27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_POT303_250527		27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-LL) 0908_POT303_250527		27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_POT303_250527		27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-LL) 0908_POT303_250527		27-May-2025	30-May-2025	23-Nov-2025	✓	04-Jun-2025	23-Nov-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	16	12.50	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	16	6.25	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2515837

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111 1.12

C-O-C number : 83344

Site : Offsite 3

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : +61-2-8784 8500

Page : 1 of 3

Quote number : ES2024AECOMAU0012

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 28-May-2025 15:30

Client Requested Due : 04-Jun-2025

Date

Issue Date : 30-May-2025

Scheduled Reporting Date : 04-Jun-2025

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : 1

Receipt Detail :

Security Seal : Not Available

Temperature : 1.0°C - Ice present

No. of samples received / analysed : 2 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **30/05/25: This is an updated SRN which indicates the new order number.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) WATER No analysis requested	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2515837-001	27-May-2025 10:22	0908_POT303_250527		✓
ES2515837-002	27-May-2025 10:22	0908_QC119_250527	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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CHAIN OF CUSTODY COC#: 83344 ALS Laboratory: ES Sydney Environmental			RELINQUISHED BY: 		RELINQUISHED BY: 		RECEIVED BY: 				
CLIENT: AECOMAU - AECOM Australia Pty Ltd			DATE TIME: 29/5/25 1930		DATE TIME:		DATE TIME:				
PROJECT: NSW_0908_PFASOMP_25			TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle)						
SITE: Offsite 3			Biohazard info:		Custody Seal intact? Yes No N/A						
ORDER NO: 60739111_1.10.1					Free ice / frozen ice bricks present upon receipt? Yes No N/A						
PROJECT MANAGER:			CONTACT PH: SAMPLER MOBILE:		Random Sample Temperature on Receipt: 10 °C						
PRIMARY SAMPLER:			QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012		Other comments:						
EMAIL REPORTS TO:											
SAMPLE DETAILS							ANALYSIS REQUIRED		Environmental Division Sydney Work Order Reference ES2515837  Telephone : + 61-2-8784 8555		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS			ADDITIONAL INFORMATION
001	0908_POT303_250527		27/05/2025 10:22 AM	WATER	ALS: 4 Non ALS: 0	No	X				
002	0908_QC119_250527		27/05/2025 10:22 AM	WATER	ALS: 4 Non ALS: 0	Yes	-				

 CHAIN OF CUSTODY COC#: 83344 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	29 15 125 1930	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 3 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:	LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> Free ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: <u>20</u> °C Other comments:				
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_POT303_250527	HDPE (no PTFE)	20 mL	00352407181311	Grey	No	
001	0908_POT303_250527	HDPE (no PTFE)	20 mL	00352407052489	Grey	No	
001	0908_POT303_250527	HDPE (no PTFE)	20 mL	00352407181657	Grey	No	
001	0908_POT303_250527	HDPE (no PTFE)	20 mL	00352407052372	Grey	No	
002	0908_QC119_250527	HDPE (no PTFE)	20 mL	00352407181693	Grey	No	
002	0908_QC119_250527	HDPE (no PTFE)	20 mL	00352407185790	Grey	No	
002	0908_QC119_250527	HDPE (no PTFE)	20 mL	00352407181796	Grey	No	
002	0908_QC119_250527	HDPE (no PTFE)	20 mL	00352407185810	Grey	No	
Total Bottle Count: ALS: 8, Non ALS: 0							

ES2515837
ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AFCom

Project Manager: _____

ALS Compass COC Reference: 83344 # Samples: _____

Phone: (_____)

Sampler: _____

Phone: (_____)

Turnaround Requirements: Standard _____ Urgent _____

Special Instructions:

ALS Use Only

Custody seal intact? YES NO N/A

Free ice / frozen ice bricks upon receipt? YES NO N/A

Random sample temperature on receipt? 1.0 °C

Custody:

Relinquished by:

[Redacted]

Date / Time:

28/5/25 1520

Received by:

[Redacted]

Date / Time:

1530
28.05.25

Relinquished by:

[Redacted]

Date / Time:

1700
28/05

Received by:

[Redacted]

Date / Time:

28/5/25 1950



CERTIFICATE OF ANALYSIS

Work Order : **ES2517305**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.12**
C-O-C number : **80513**
Sampler : **[REDACTED]**
Site : **Offsite 4**
Quote number : **[REDACTED]**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 10-Jun-2025 16:45
Date Analysis Commenced : 12-Jun-2025
Issue Date : 16-Jun-2025 15:25



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW262D_25061

0908_MW262S_25061

■■■■■

■■■■

— — — — —

Sampling date / time

10-Jun-2025 13:58

10-Jun-2025 14:07

0000 0000 0000 0000

0000-0000-0000-0000

—

Compound	CAS Number	LOR	Unit	ES2517305-001	ES2517305-002	*****	*****	*****
				Result	Result	----	----	----

Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.016	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.033	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	----	----	----

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.002	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW262D_25061 0	0908_MW262S_25061 0	----	----	----
Sampling date / time				10-Jun-2025 13:58	10-Jun-2025 14:07	----	----	----
Compound	CAS Number	LOR	Unit	ES2517305-001	ES2517305-002	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	0.051	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	0.049	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	0.051	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	100	106	----	----	----
13C8-PFOA	----	0.002	%	99.8	103	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : ES2517305

Page : 1 of 6

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.12

C-O-C number : 80513

Sampler : [REDACTED]

Site : Offsite 4

Quote number : [REDACTED]

No. of samples received : 2

No. of samples analysed : 2

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : 10-Jun-2025

Date Analysis Commenced : 12-Jun-2025

Issue Date : 16-Jun-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6643885)									
ES2517305-001	0908_MW262D_250610	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6643885)									
ES2517305-001	0908_MW262D_250610	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6643885) - continued									
ES2517305-001	0908_MW262D_250610	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6643885)									
ES2517305-001	0908_MW262D_250610	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6643885)									
ES2517305-001	0908_MW262D_250610	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6643885)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	101	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	88.6	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	115	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	87.2	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	99.8	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	88.9	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	84.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6643885)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	84.9	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	80.9	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.8	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	88.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	90.2	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	90.7	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	88.1	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	78.6	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	121	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	88.2	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	104	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	95.4	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6643885)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	76.9	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	97.6	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	80.9	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	102	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	108	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	97.8	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6643885) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	93.5	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6643885)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	80.8	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	82.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	111	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	97.8	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6643885)							
ES2517306-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	112	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	115	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	95.7	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	88.0	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	109	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	132	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	83.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6643885)							
ES2517306-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	107	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	98.6	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	102	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	100	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	99.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	97.8	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	96.0	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	122	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	92.9	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	110	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	84.4	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6643885)							
ES2517306-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	90.0	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6643885) - continued							
ES2517306-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	107	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	111	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	109	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	101	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	91.8	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	92.0	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6643885)							
ES2517306-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	85.3	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	91.0	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	107	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	93.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2517305	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 10-Jun-2025
Site	: Offsite 4	Issue Date	: 16-Jun-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.12	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW262D_250610,		0908_MW262S_250610	10-Jun-2025	12-Jun-2025	07-Dec-2025	✓	16-Jun-2025	07-Dec-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW262D_250610,		0908_MW262S_250610	10-Jun-2025	12-Jun-2025	07-Dec-2025	✓	16-Jun-2025	07-Dec-2025	✓
EP231C: Perfluoroalkyl Sulfonamides									
HDPE (no PTFE) (EP231X-LL) 0908_MW262D_250610,		0908_MW262S_250610	10-Jun-2025	12-Jun-2025	07-Dec-2025	✓	16-Jun-2025	07-Dec-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW262D_250610,		0908_MW262S_250610	10-Jun-2025	12-Jun-2025	07-Dec-2025	✓	16-Jun-2025	07-Dec-2025	✓
EP231P: PFAS Sums									
HDPE (no PTFE) (EP231X-LL) 0908_MW262D_250610,		0908_MW262S_250610	10-Jun-2025	12-Jun-2025	07-Dec-2025	✓	16-Jun-2025	07-Dec-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	10	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	10	10.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2517305**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : **NSW_0908_PFASOMP_25**

Order number : **60739111_1.12**

C-O-C number : **80513**

Site : **Offsite 4**

Sampler : [REDACTED]

Laboratory : **Environmental Division Sydney**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : **+61-2-8784 8500**

Page : **1 of 3**

Quote number : **ES2024AECOMAU0012**

[REDACTED]

QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **10-Jun-2025 16:45**

Client Requested Due : **17-Jun-2025**

Date

Issue Date : **11-Jun-2025**

Scheduled Reporting Date : **17-Jun-2025**

Delivery Details

Mode of Delivery : **Undefined**

No. of coolers/boxes : **1**

Receipt Detail :

Security Seal : **Not Available**

Temperature : **0.3 - Ice present**

No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- 11/06/2025: This is an updated SRN which indicates the order number changed to 60739111_1.12. for this work order.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2517305-001	10-Jun-2025 13:58	0908_MW262D_250610	✓
ES2517305-002	10-Jun-2025 14:07	0908_MW262S_250610	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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CHAIN OF CUSTODY COC#: 80513 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:		[Redacted] 10/6/25 1930		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 4 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: [Redacted] PRIMARY SAMPLER: [Redacted] EMAIL REPORTS TO: [Redacted]				TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: 0.3 °C Other comments:			
SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 8 - PFAS Full Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW262D_250610		10/06/2025 01:58 PM	WATER	ALS: 4 Non ALS: 0	No	X		
002	0908_MW262S_250610		10/06/2025 02:07 PM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2517305



Telephone : + 61-2-6764 8556

CHAIN OF CUSTODY COC#: 80513 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	 DATE TIME: 10/6/15 1930	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 4 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> <u>Free</u> ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A Random Sample Temperature on Receipt: 0.3 °C Other comments:			
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW262D_250610	HDPE (no PTFE)	20 mL	00352504033396	Grey	No	
001	0908_MW262D_250610	HDPE (no PTFE)	20 mL	00352504033251	Grey	No	
001	0908_MW262D_250610	HDPE (no PTFE)	20 mL	00352504033217	Grey	No	
001	0908_MW262D_250610	HDPE (no PTFE)	20 mL	00352504033389	Grey	No	
002	0908_MW262S_250610	HDPE (no PTFE)	20 mL	00352504033267	Grey	No	
002	0908_MW262S_250610	HDPE (no PTFE)	20 mL	00352504033246	Grey	No	
002	0908_MW262S_250610	HDPE (no PTFE)	20 mL	00352504033400	Grey	No	
002	0908_MW262S_250610	HDPE (no PTFE)	20 mL	00352504033466	Grey	No	
Total Bottle Count: ALS: 8, Non ALS: 0							

ES2517305

ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 80513 # Samples: 2 Sampler: [REDACTED]
Phone: [REDACTED] Phone: [REDACTED]

Turnaround Requirements: Standard LAB OF ORIGIN: NEWCASTLE

Special Instructions:

E-MAILED

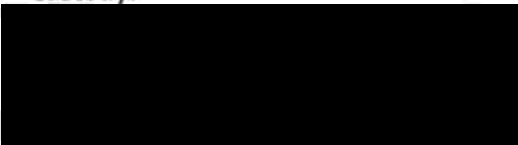
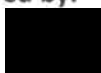
ALS Use Only

Custody seal intact? YES NO N/A

Free ice / frozen ice bricks upon receipt? YES NO N/A

Random sample temperature on receipt? 0.3 °C

Custody:

	Received by: 	Relinquished by: 	Received by: 
Date / Time: <u>10/6/25</u> <u>4:15pm</u>	Date / Time: <u>10/06/25</u> <u>16:15</u>	Date / Time: <u>10/6</u> <u>1700</u>	Date / Time: <u>10/6</u> <u>19:30</u>



CERTIFICATE OF ANALYSIS

Work Order : **ES2517306**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.12**
C-O-C number : **83956**
Sampler : **[REDACTED]**
Site : **Offsite 5**
Quote number : **[REDACTED]**
No. of samples received : **3**
No. of samples analysed : **3**

Page : 1 of 4
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 10-Jun-2025 16:15
Date Analysis Commenced : 12-Jun-2025
Issue Date : 16-Jun-2025 15:27



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW142S_25061 0	0908_MW142D_25061 0	0908_MW538_250610	----	----
Sampling date / time				10-Jun-2025 14:39	10-Jun-2025 14:44	10-Jun-2025 15:08	----	----
Compound	CAS Number	LOR	Unit	ES2517306-001	ES2517306-002	ES2517306-003	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.052	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.195	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.007	0.004	0.235	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.02	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.008	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.054	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.004	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.011	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	----	----
EP231P: PFAS Sums								
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.007	0.004	0.430	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.007	0.004	0.579	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	101	108	105	----	----
13C8-PFOA	----	0.002	%	99.3	101	102	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2517306**

Page : 1 of 4

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : [REDACTED]

Telephone : ----

Project : **NSW_0908_PFASOMP_25**

Order number : **60739111_1.12**

C-O-C number : **83956**

Sampler : [REDACTED]

Site : **Offsite 5**

Quote number : [REDACTED]

No. of samples received : **3**

No. of samples analysed : **3**

Laboratory : **Environmental Division Sydney**

Contact : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : **10-Jun-2025**

Date Analysis Commenced : **12-Jun-2025**

Issue Date : **16-Jun-2025**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

[REDACTED]

Position

[REDACTED]

Accreditation Category

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6643885)									
ES2517305-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6643885)									
ES2517305-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6643885)									
ES2517305-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6643885)								
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	88.6	72.0	130
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	87.2	68.0	131
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	88.9	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6643885)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	84.9	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	80.9	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	84.8	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	88.8	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	90.2	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6643885)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	80.8	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	82.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	111	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	97.8	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6643885)							
ES2517306-001	0908_MW142S_250610	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	115	72.0	130
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	88.0	68.0	131
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	132	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6643885)							
ES2517306-001	0908_MW142S_250610	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	107	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	98.6	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	102	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	100	71.0	133



Sub-Matrix: WATER				Matrix Spike (MS) Report			
Laboratory sample ID		Sample ID		Spike	SpikeRecovery(%)	Acceptable Limits (%)	
		Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6643885)							
ES2517306-001	0908_MW142S_250610	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	85.3	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	91.0	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	107	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	93.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2517306	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 10-Jun-2025
Site	: Offsite 5	Issue Date	: 16-Jun-2025
Sampler	: [REDACTED]	No. of samples received	: 3
Order number	: 60739111_1.12	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW142S_250610, 0908_MW538_250610		0908_MW142D_250610,	10-Jun-2025	12-Jun-2025	07-Dec-2025	✔	16-Jun-2025	07-Dec-2025	✔
EP231B: Perfluoroalkyl Carboxylic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW142S_250610, 0908_MW538_250610		0908_MW142D_250610,	10-Jun-2025	12-Jun-2025	07-Dec-2025	✔	16-Jun-2025	07-Dec-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL) 0908_MW142S_250610, 0908_MW538_250610		0908_MW142D_250610,	10-Jun-2025	12-Jun-2025	07-Dec-2025	✔	16-Jun-2025	07-Dec-2025	✔
EP231P: PFAS Sums									
HDPE (no PTFE) (EP231X-LL) 0908_MW142S_250610, 0908_MW538_250610		0908_MW142D_250610,	10-Jun-2025	12-Jun-2025	07-Dec-2025	✔	16-Jun-2025	07-Dec-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	10	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	10	10.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2517306**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : **NSW_0908_PFASOMP_25**

Order number : **60739111_1.12**

C-O-C number : **83956**

Site : **Offsite 5**

Sampler : [REDACTED]

Laboratory : **Environmental Division Sydney**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : **+61-2-8784 8500**

Page : **1 of 3**

Quote number : **ES2024AECOMAU0012**

QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **10-Jun-2025 16:15**

Client Requested Due : **17-Jun-2025**

Date

Issue Date : **11-Jun-2025**

Scheduled Reporting Date : **17-Jun-2025**

Delivery Details

Mode of Delivery : **Undefined**

No. of coolers/boxes : **1**

Receipt Detail :

Security Seal : **Not Available**

Temperature : **0.3 - Ice present**

No. of samples received / analysed : **3 / 3**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- 11/06/2025: This is an updated SRN which indicates the order number changed to 60739111_1.12 for this work order.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231-LL PFAS - Short Suite Low Level (12 analytes)
ES2517306-001	10-Jun-2025 14:39	0908_MW142S_250610	✓
ES2517306-002	10-Jun-2025 14:44	0908_MW142D_250610	✓
ES2517306-003	10-Jun-2025 15:08	0908_MW538_250610	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

[REDACTED]
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CHAIN OF CUSTODY COC#: 83956 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: 		RELINQUISHED BY: 		RECEIVED BY: 	
CLIENT: AECOMAU - AECOM Australia Pty Ltd		DATE TIME:		DATE TIME:		DATE TIME:	
PROJECT: NSW_0908_PFASOMP_25		TURNAROUND REQUIREMENTS : 5 Days		LABORATORY USE ONLY (Circle)			
SITE: Offsite 5		Biohazard info:		Custody Seal intact? Yes No <u>N/A</u>			
ORDER NO: 60739111_1.10.1				Free ice / frozen ice bricks present upon receipt? <u>Yes</u> No N/A			
PROJECT MANAGER:		CONTACT PH: SAMPLER MOBILE:		Random Sample Temperature on Receipt: <u>03</u> °C			
PRIMARY SAMPLER:		QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012		Other comments:			
EMAIL REPORTS TO:							

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Table 4 - PFAS Short Suite LL Water WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW142S_250610		10/06/2025 02:39 PM	WATER	ALS: 4 Non ALS: 0	No	X		
002	0908_MW142D_250610		10/06/2025 02:44 PM	WATER	ALS: 4 Non ALS: 0	No	X		
003	0908_MW538_250610		10/06/2025 03:08 PM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2517306



Telephone : + 61-2-8784 8555

CHAIN OF CUSTODY COC#: 83956 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	10/6/25 1930	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:			
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 5 ORDER NO: 60739111_1.10.1 PROJECT MANAGER: PRIMARY SAMPLER: EMAIL REPORTS TO:		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No <u>N/A</u> Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: 0.3 °C Other comments:				
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON	
001	0908_MW142S_250610	HDPE (no PTFE)	20 mL	00352504033308	Grey	No		
001	0908_MW142S_250610	HDPE (no PTFE)	20 mL	00352504033440	Grey	No		
001	0908_MW142S_250610	HDPE (no PTFE)	20 mL	00352504033206	Grey	No		
001	0908_MW142S_250610	HDPE (no PTFE)	20 mL	00352504033298	Grey	No		
002	0908_MW142D_250610	HDPE (no PTFE)	20 mL	00352504033264	Grey	No		
002	0908_MW142D_250610	HDPE (no PTFE)	20 mL	00352504033330	Grey	No		
002	0908_MW142D_250610	HDPE (no PTFE)	20 mL	00352504033434	Grey	No		
002	0908_MW142D_250610	HDPE (no PTFE)	20 mL	00352504033248	Grey	No		
003	0908_MW538_250610	HDPE (no PTFE)	20 mL	00352504033336	Grey	No		
003	0908_MW538_250610	HDPE (no PTFE)	20 mL	00352504033343	Grey	No		
003	0908_MW538_250610	HDPE (no PTFE)	20 mL	00352504033345	Grey	No		
003	0908_MW538_250610	HDPE (no PTFE)	20 mL	00352504033191	Grey	No		
Total Bottle Count: ALS: 12, Non ALS: 0								

ES 2517306

ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 83956 # Samples: 3 Phone: [REDACTED]
Sampler: [REDACTED]
Phone: [REDACTED]

Turnaround Requirements: StandardUrgent
LAB OF ORIGIN:
NEWCASTLE

Special Instructions:

E-MAILED

ALS Use Only

Custody seal intact?

YES NO N/A

Free ice / frozen ice bricks upon receipt?

YES NO N/A

Random sample temperature on receipt?

0.3 °C

Custody:

Received by:

[REDACTED]

Date / Time: 10/06/25
16:15

Relinquished by:

[REDACTED]

Date / Time: 10/06
1700

Received by:

[REDACTED]

Date / Time: 10/6
16:30



CERTIFICATE OF ANALYSIS

Work Order : **ES2519162**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.12**
C-O-C number : **80513**
Sampler : **[REDACTED]**
Site : **Offsite 4**
Quote number : **[REDACTED]**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 10-Jun-2025 16:45
Date Analysis Commenced : 30-Jun-2025
Issue Date : 01-Jul-2025 12:29



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0908_MW262S_25061
0

Sampling date / time

10-Jun-2025 14:07

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2519162-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.019	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.032	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.003	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0908_MW262S_25061
0

Sampling date / time

10-Jun-2025 14:07

Compound CAS Number LOR Unit

ES2519162-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.056	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.051	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.056	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	86.1	----	----	----	----
13C8-PFOA	----	0.002	%	94.1	----	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : ES2519162

Page : 1 of 6

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : [REDACTED]

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.12

C-O-C number : 80513

Sampler : [REDACTED]

Site : Offsite 4

Quote number : [REDACTED]

No. of samples received : 1

No. of samples analysed : 1

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : [REDACTED]

Telephone : [REDACTED]

Date Samples Received : 10-Jun-2025

Date Analysis Commenced : 30-Jun-2025

Issue Date : 01-Jul-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6677180)									
ES2518997-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002 (0.100) *	µg/L	90.1	88.6	1.7	0% - 20%
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002 (0.100) *	µg/L	3.27	3.31	1.2	0% - 20%
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002 (0.100) *	µg/L	84.5	84.3	0.2	0% - 20%
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002 (0.100) *	µg/L	13.3	12.6	5.2	0% - 20%
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002 (1.00)*	µg/L	204	210	3.1	0% - 20%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002 (0.100) *	µg/L	0.996	0.866	14.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01 (0.10)*	µg/L	<0.10	<0.10	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6677180)									
ES2518997-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002 (0.100) *	µg/L	7.47	7.49	0.3	0% - 20%
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002 (0.100) *	µg/L	62.8	60.2	4.3	0% - 20%
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002 (0.100) *	µg/L	53.8	50.9	5.7	0% - 20%
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002 (1.00)*	µg/L	785	716	9.2	0% - 20%



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6677180) - continued									
ES2518997-001	Anonymous	EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002 (0.100) *	µg/L	40.3	40.6	0.9	0% - 20%
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002 (0.100) *	µg/L	35.8	35.6	0.5	0% - 20%
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002 (0.100) *	µg/L	1.87	1.73	7.6	0% - 50%
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002 (0.100) *	µg/L	1.72	1.77	3.3	0% - 50%
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002 (0.100) *	µg/L	0.196	0.188	4.2	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005 (0.250) *	µg/L	<0.250	<0.250	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005 (0.250) *	µg/L	<0.250	<0.250	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01 (0.50)*	µg/L	1.04	1.20	13.8	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6677180)									
ES2518997-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002 (0.100) *	µg/L	1.04	1.11	6.7	0% - 50%
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002 (0.100) *	µg/L	18.5	21.8	16.2	0% - 20%
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002 (0.100) *	µg/L	14.1	15.2	7.2	0% - 20%
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005 (0.250) *	µg/L	<0.250	<0.250	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005 (0.250) *	µg/L	<0.250	<0.250	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005 (0.250) *	µg/L	2.35	2.08	12.2	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005 (0.250) *	µg/L	0.600	0.632	5.2	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6677180)									
ES2518997-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005 (0.100) *	µg/L	<0.100	<0.100	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005 (1.00)*	µg/L	172	176	1.9	0% - 20%
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005 (0.100) *	µg/L	17.2	15.1	13.1	0% - 20%
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005 (0.100) *	µg/L	1.44	1.31	10.0	0% - 50%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6677180)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	108	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	89.8	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	117	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	99.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	101	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	99.8	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	92.1	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6677180)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	102	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	99.9	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	105	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	105	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	111	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	99.4	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	102	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	115	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	113	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	95.6	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	111	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	108	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6677180)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	108	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	110	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	97.2	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	112	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	106	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	91.1	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6677180) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	103	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6677180)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	106	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.1	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	135	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	86.6	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6677180)							
ES2518997-002	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	120	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	81.3	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	94.2	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	# Not Determined	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	118	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	# Not Determined	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	86.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6677180)							
ES2518997-002	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	98.9	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	96.8	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	101	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	# Not Determined	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	# Not Determined	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	# Not Determined	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	81.2	69.0	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6677180) - continued							
ES2518997-002	Anonymous	EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	76.3	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	88.9	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	114	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	104	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6677180)							
ES2518997-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	# Not Determined	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	91.0	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	115	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	# Not Determined	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	# 61.1	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	# Not Determined	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	# Not Determined	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6677180)							
ES2518997-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	92.5	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	# Not Determined	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	# Not Determined	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	# Not Determined	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2519162	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 10-Jun-2025
Site	: Offsite 4	Issue Date	: 01-Jul-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.12	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2518997--002	Anonymous	Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	ES2518997--002	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2518997--002	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2518997--002	Anonymous	Perfluorooctanoic acid (PFOA)	335-67-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2518997--002	Anonymous	Perfluorononanoic acid (PFNA)	375-95-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2518997--002	Anonymous	Perfluorodecanoic acid (PFDA)	335-76-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231C: Perfluoroalkyl Sulfonamides	ES2518997--002	Anonymous	Perfluorooctane sulfonamide (FOSA)	754-91-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231C: Perfluoroalkyl Sulfonamides	ES2518997--002	Anonymous	N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231C: Perfluoroalkyl Sulfonamides	ES2518997--002	Anonymous	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	61.1 %	63.2-134%	Recovery less than lower data quality objective
EP231C: Perfluoroalkyl Sulfonamides	ES2518997--002	Anonymous	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231C: Perfluoroalkyl Sulfonamides	ES2518997--002	Anonymous	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2518997--002	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.



Matrix: WATER							
Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries - Continued							
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2518997--002	Anonymous	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2518997--002	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: WATER					Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.		
Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✔	30-Jun-2025	07-Dec-2025	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✔	30-Jun-2025	07-Dec-2025	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✔	30-Jun-2025	07-Dec-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✔	30-Jun-2025	07-Dec-2025	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✔	30-Jun-2025	07-Dec-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2519162**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : **NSW_0908_PFASOMP_25**

Order number : **60739111_1.12**

C-O-C number : **80513**

Site : **Offsite 4**

Sampler : [REDACTED]

Laboratory : **Environmental Division Sydney**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : **+61-2-8784 8500**

Page : **1 of 3**

Quote number : **ES2024AECOMAU0012**

QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **10-Jun-2025 16:45**

Client Requested Due : **01-Jul-2025**

Date

Issue Date : **25-Jun-2025**

Scheduled Reporting Date : **01-Jul-2025**

Delivery Details

Mode of Delivery : **Undefined**

No. of coolers/boxes : ----

Receipt Detail :

Security Seal : **Not Available**

Temperature : ----

No. of samples received / analysed : **1 / 1**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Rebatch of ES2517305
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2519162-001	10-Jun-2025 14:07	0908_MW262S_250610	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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REBATCH REQUEST

[illegible]

Environmental Division
Sydney
Work Order Reference
ES2519162



Telephone : + 61-2-8784 8556

14-Jan-00

Fadi Soro

From: [REDACTED]
Sent: Tuesday, 24 June 2025 9:50 PM
To: rebatches.sydney
Cc: [REDACTED]
Subject: FW: [EXTERNAL] - RE: - RE: - Potential re-analysis request PFAS Williamtown
Attachments: Rebatch AECOM ALS Workorder ES2517306, Client AECOMAU, Project NSW_0908_PFASOMP_25.xlsm; Rebatch AECOM ALS Workorder ES2517305.xlsm

Hi Team,

Can I get you to arrange these attached two separate rebatch requests for AECOM on standard TAT?

Please add a lab remark that they are repeats of the original samples, for the lab to evaluate the data before reporting. [REDACTED] just an FYI.

Can you please let me know the two new work orders? [REDACTED] grabbed the samples for me so they are probably on the bench.

Thanks!

Kind regards,



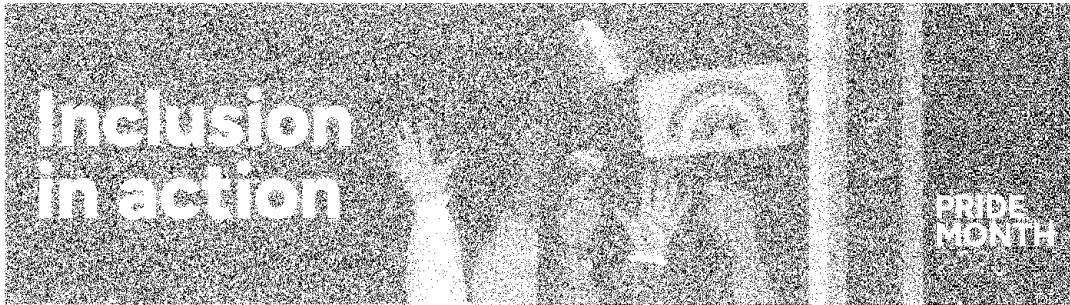
right solutions.
right partner.

[REDACTED]
Sydney, NSW

[REDACTED]
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

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I choose to work flexibly and send emails outside of my normal office hours. There is no expectation to respond to my emails outside of yours.

Monday	Tuesday	Wednesday	Thursday	Friday
Office	Office	Office	Office	Office

[EnviroMail 148 Australia – Interpreting TOP Assay](#)

[EnviroMail 149 Australia - Net Zero commitments and roadmap](#)

[EnviroMail 150 Australia - Spotlight on emerging contaminants - Triclosan](#)

[EnviroMail 151 Australia - Expanding the scope of PFAS analysis in soils and waters](#)

[EnviroMail 152 Australia – Analysing Air & Gas with Canisters](#)

[EnviroMail 93 Australia Re-release – Laboratory quality assurance/quality control](#)

Sent: Tuesday, 24 June 2025 5:58 PM

Subject: [EXTERNAL] - RE: - RE: - Potential re-analysis request PFAS Williamtown

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Could we please have the following two samples reanalysed under separate batches?

SampleCode	Lab Sampled Date	FieldID	Batch Number
ES2517306003	10/06/2025 15:08	0908_MW538_250610	ES2517306
ES2517305002	10/06/2025 14:07	0908_MW2625_250610	ES2517305

Kind regards,

[REDACTED]
Senior Environmental Scientist, ANZ, NAC
[REDACTED]

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I acknowledge the Traditional Custodians of the Country on which we work and learn every day, and pay my respects to Elders past, present, and future.

PS: I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours.

[REDACTED]
Sent: Tuesday, 24 June 2025 4:42 PM

[REDACTED]
Subject: RE: - RE: - Potential re-analysis request PFAS Williamtown

[REDACTED]
Sample receipt have confirmed that we still have ES2517305 & ES2517306 in tray LC37. The others have already been discarded unfortunately in line with our standard disposal procedure.

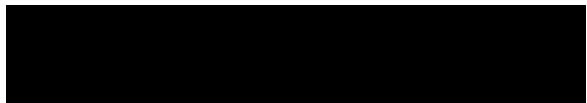
Let me know if you would like me to initiate any repeats/analysis with these samples.

Cheers.

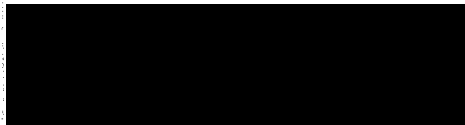
Kind regards,



right solutions.
right partners.

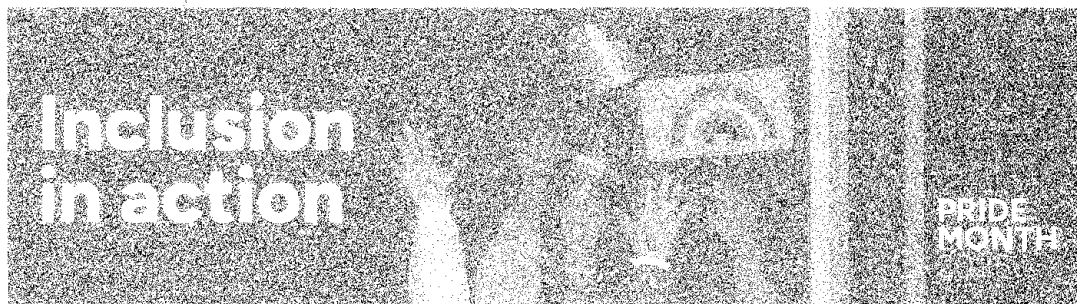


Sydney, NSW



277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

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Monday	Tuesday	Wednesday	Thursday	Friday
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[EnviroMail 148 Australia – Interpreting TOP Assay](#)

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[EnviroMail 151 Australia – Expanding the scope of PFAS analysis in soils and waters](#)

[EnviroMail 152 Australia – Analysing Air & Gas with Canisters](#)

[EnviroMail 93 Australia Re-release – Laboratory quality assurance/quality control](#)



Sent: Tuesday, 24 June 2025 1:48 PM



[REDACTED]
Subject: [EXTERNAL] - RE: - Potential re-analysis request PFAS Williamtown

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Thanks!

[REDACTED]
Senior Environmental Scientist, ANZ NAC
[REDACTED]

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I acknowledge the Traditional Custodians of the Country on which we work and learn every day, and pay my respects to Elders past, present, and future.

PS: I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours.

[REDACTED]
Sent: Tuesday, 24 June 2025 12:14 PM

[REDACTED]
Subject: RE: - Potential re-analysis request PFAS Williamtown

[REDACTED]
I will get sample receipt to check what we have and get back to you!
(Sorry – I typed that an hour ago and forgot to hit send)

Kind regards,



right solutions.
right partner.

[Redacted]
Sydney, NSW

[Redacted]
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com



I choose to work flexibly and send emails outside of my normal office hours. There is no expectation to respond to my emails outside of yours.

Monday	Tuesday	Wednesday	Thursday	Friday
Office	Office	Office	Office	Office

[EnviroMail 148 Australia - Interpreting TOP Assay](#)

[EnviroMail 149 Australia - Net Zero commitments and roadmap](#)

[EnviroMail 150 Australia - Spotlight on emerging contaminants - Triclosan](#)

[EnviroMail 151 Australia - Expanding the scope of PFAS analysis in soils and waters](#)

[EnviroMail 152 Australia - Analysing Air & Gas with Canisters](#)

[EnviroMail 93 Australia Re-release - Laboratory quality assurance/quality control](#)

[Redacted]
Sent: Tuesday, 24 June 2025 10:32 AM
[Redacted]

Subject: [EXTERNAL] - Potential re-analysis request PFAS Williamtown

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

As we did for some samples last month, we may need to request re-analysis/re-batches for the more recent lot below. Can you confirm which of the samples below you have in storage still?

SampleCode	Lab Sampled Date	FieldID	Batch Number
ES2515730001	26/05/2025 10:10	0908_POT365_250526	ES2515730
ES2515729001	27/05/2025 9:30	0908_MW144_250527	ES2515729
ES2515729002	27/05/2025 9:00	0908_MW536_250527	ES2515729
ES2515729003	27/05/2025 9:15	0908_MW537_250527	ES2515729
ES2517306001	10/06/2025 14:39	0908_MW142S_250610	ES2517306
ES2517306002	10/06/2025 14:44	0908_MW142D_250610	ES2517306
ES2517306003	10/06/2025 15:08	0908_MW538_250610	ES2517306
ES2517305002	10/06/2025 14:07	0908_MW262S_250610	ES2517305

Regards

Senior Environmental Scientist, ANZ NAC

AECOM

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I acknowledge the Traditional Custodians of the Country on which we work and learn every day, and pay my respects to Elders past, present, and future.

PS: I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours.



CERTIFICATE OF ANALYSIS

Work Order : **ES2519163**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.12**
C-O-C number : **83956**
Sampler : **[REDACTED]**
Site : **Offsite 5**
Quote number : **[REDACTED]**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 4
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **[REDACTED]**
Telephone : **[REDACTED]**
Date Samples Received : 10-Jun-2025 16:15
Date Analysis Commenced : 30-Jun-2025
Issue Date : 01-Jul-2025 12:30



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW538_250610

Sampling date / time

10-Jun-2025 15:08

Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.046	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.202	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.234	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.03	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.008	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.056	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	0.004	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.011	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----
EP231P: PFAS Sums								
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.436	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.591	----	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	94.5	----	----	----	----
13C8-PFOA	----	0.002	%	88.5	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2519163**

Page : 1 of 5

Client : **AECOM AUSTRALIA PTY LTD**

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Contact : [REDACTED]

Address : [REDACTED]

Address : [REDACTED]

Telephone : ----

Telephone : [REDACTED]

Project : NSW_0908_PFASOMP_25

Date Samples Received : 10-Jun-2025

Order number : 60739111_1.12

Date Analysis Commenced : 30-Jun-2025

C-O-C number : 83956

Issue Date : 01-Jul-2025

Sampler : [REDACTED]

Site : Offsite 5

Quote number : [REDACTED]

No. of samples received : 1

No. of samples analysed : 1



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

[REDACTED]

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6677180)									
ES2518997-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002 (0.100) *	µg/L	90.1	88.6	1.7	0% - 20%
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002 (0.100) *	µg/L	84.5	84.3	0.2	0% - 20%
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002 (1.00)*	µg/L	204	210	3.1	0% - 20%
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6677180)									
ES2518997-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002 (0.100) *	µg/L	7.47	7.49	0.3	0% - 20%
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002 (0.100) *	µg/L	62.8	60.2	4.3	0% - 20%
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002 (0.100) *	µg/L	53.8	50.9	5.7	0% - 20%
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002 (1.00)*	µg/L	785	716	9.2	0% - 20%
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01 (0.50)*	µg/L	1.04	1.20	13.8	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6677180)									
ES2518997-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005 (0.100) *	µg/L	<0.100	<0.100	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005 (1.00)*	µg/L	172	176	1.9	0% - 20%
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005 (0.100) *	µg/L	17.2	15.1	13.1	0% - 20%



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6677180) - continued									
ES2518997-001	Anonymous	EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005 (0.100) *	µg/L	1.44	1.31	10.0	0% - 50%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6677180)								
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	89.8	72.0	130
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	99.9	68.0	131
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	99.8	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6677180)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	102	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	99.9	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	105	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	105	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	111	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6677180)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	106	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.1	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	135	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	86.6	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	Spike Recovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6677180)							
ES2518997-002	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	81.3	72.0	130
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	# Not Determined	68.0	131
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	# Not Determined	65.0	140
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6677180)							
ES2518997-002	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	98.9	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	96.8	72.0	129



Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6677180) - continued							
ES2518997-002	Anonymous	EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	101	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	# Not Determined	71.0	133
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6677180)							
ES2518997-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	92.5	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	# Not Determined	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	# Not Determined	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	# Not Determined	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2519163	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: [REDACTED]
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 10-Jun-2025
Site	: Offsite 5	Issue Date	: 01-Jul-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.12	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2518997--002	Anonymous	Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	ES2518997--002	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2518997--002	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2518997--002	Anonymous	Perfluorooctanoic acid (PFOA)	335-67-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2518997--002	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2518997--002	Anonymous	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2518997--002	Anonymous	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW538_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✓	30-Jun-2025	07-Dec-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW538_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✓	30-Jun-2025	07-Dec-2025	✓



Matrix: WATER					Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.		
Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW538_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✔	30-Jun-2025	07-Dec-2025	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW538_250610	10-Jun-2025	30-Jun-2025	07-Dec-2025	✔	30-Jun-2025	07-Dec-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2519163**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : **NSW_0908_PFASOMP_25**

Order number : **60739111_1.12**

C-O-C number : **83956**

Site : **Offsite 5**

Sampler : [REDACTED]

Laboratory : **Environmental Division Sydney**

Contact : [REDACTED]

Address : [REDACTED]

E-mail : [REDACTED]

Telephone : [REDACTED]

Facsimile : **+61-2-8784 8500**

Page : **1 of 3**

Quote number : **ES2024AECOMAU0012**

QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **10-Jun-2025 16:15**

Client Requested Due : **01-Jul-2025**

Date

Issue Date : **25-Jun-2025**

Scheduled Reporting Date : **01-Jul-2025**

Delivery Details

Mode of Delivery : **Undefined**

No. of coolers/boxes : ----

Receipt Detail :

Security Seal : **Not Available**

Temperature : ----

No. of samples received / analysed : **1 / 1**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Rebatch of ES2517306
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Issue Date : 25-Jun-2025
Page : 2 of 3
Work Order : ES2519163 Amendment 0
Client : AECOM AUSTRALIA PTY LTD

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231-LL PFAS - Short Suite Low Level (12 analytes)
ES2519163-001	10-Jun-2025 15:08	0908_MW538_250610	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS PAYABLE

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

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Fadi Soro

From: [REDACTED]
Sent: Tuesday, 24 June 2025 9:50 PM
To: rebatches.sydney
Cc: [REDACTED]
Subject: FW: [EXTERNAL] - RE: - RE: - Potential re-analysis request PFAS Williamtown
Attachments: Rebatch AECOM ALS Workorder ES2517306, Client AECOMAU, Project NSW_0908_PFASOMP_25.xlsm; Rebatch AECOM ALS Workorder ES2517305.xlsm

Hi Team,

Can I get you to arrange these attached two separate rebatch requests for AECOM on standard TAT?

Please add a lab remark that they are repeats of the original samples, for the lab to evaluate the data before reporting [REDACTED] just an FYI.

Can you please let me know the two new work orders? [REDACTED] grabbed the samples for me so they are probably on the bench.

Thanks!

Kind regards,



right solutions.
right partner.

[REDACTED]
Sydney, NSW

[REDACTED]
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com





I choose to work flexibly and send emails outside of my normal office hours. There is no expectation to respond to my emails outside of yours.

Monday	Tuesday	Wednesday	Thursday	Friday
Office	Office	Office	Office	Office

[EnviroMail 148 Australia – Interpreting TOP Assay](#)

[EnviroMail 149 Australia – Net Zero commitments and roadmap](#)

[EnviroMail 150 Australia – Spotlight on emerging contaminants – Triclosan](#)

[EnviroMail 151 Australia – Expanding the scope of PFAS analysis in soils and waters](#)

[EnviroMail 152 Australia – Analysing Air & Gas with Canisters](#)

[EnviroMail 93 Australia Re-release – Laboratory quality assurance/quality control](#)

Sent: Tuesday, 24 June 2025 5:58 PM

Subject: [EXTERNAL] - RE: - RE: - Potential re-analysis request PFAS Williamtown

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Could we please have the following two samples reanalysed under separate batches?

SampleCode	Lab Sampled Date	FieldID	Batch Number
ES2517306003	10/06/2025 15:08	0908_MW538_250610	ES2517306
ES2517305002	10/06/2025 14:07	0908_MW2625_250610	ES2517305

Kind regards,

[REDACTED]
Senior Environmental Scientist, ANZ NAO
[REDACTED]

AECOM

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I acknowledge the Traditional Custodians of the Country on which we work and learn every day, and pay my respects to Elders past, present, and future.

PS: I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours.

[REDACTED]
Sent: Tuesday, 24 June 2025 4:42 PM

[REDACTED]
Subject: RE: - RE: - Potential re-analysis request PFAS Williamstown

[REDACTED]
Sample receipt have confirmed that we still have ES2517305 & ES2517306 in tray LC37. The others have already been discarded unfortunately in line with our standard disposal procedure.

Let me know if you would like me to initiate any repeats/analysis with these samples.

Cheers.

Kind regards,

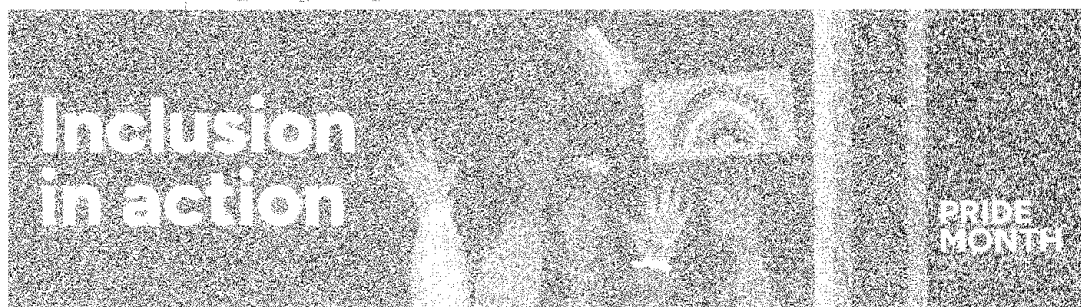


right solutions.
right partner.

[Redacted]
Sydney, NSW

[Redacted]
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

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[EnviroMail 149 Australia – Net Zero commitments and roadmap](#)

[EnviroMail 150 Australia – Spotlight on emerging contaminants – Triclosan](#)

[EnviroMail 151 Australia – Expanding the scope of PFAS analysis in soils and waters](#)

[EnviroMail 152 Australia – Analysing Air & Gas with Canisters](#)

[EnviroMail 93 Australia Re-release – Laboratory quality assurance/quality control](#)

[Redacted]
Sent: Tuesday, 24 June 2025 1:48 PM
[Redacted]

[REDACTED]
Subject: [EXTERNAL] - RE: - Potential re-analysis request PFAS Williamtown

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Thanks!

[REDACTED]
Senior Environmental Scientist, ANZ NAC
[REDACTED]

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[REDACTED]
Sent: Tuesday, 24 June 2025 12:14 PM

[REDACTED]
Subject: RE: - Potential re-analysis request PFAS Williamtown

[REDACTED]
I will get sample receipt to check what we have and get back to you!
(Sorry – I typed that an hour ago and forgot to hit send)

Kind regards,

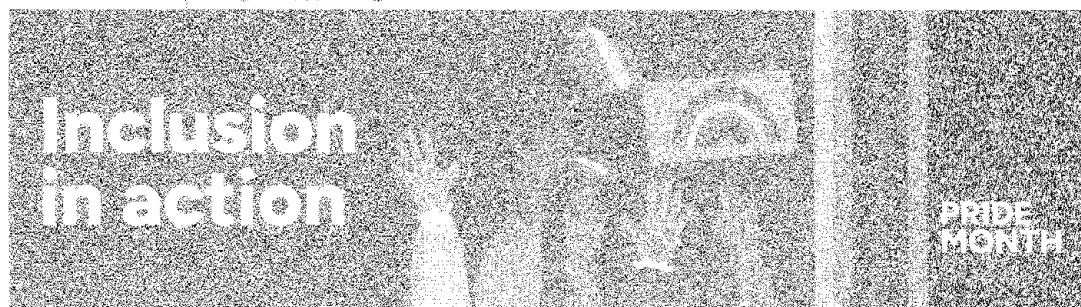


right solutions.
right partner.

[REDACTED]
Sydney, NSW

[REDACTED]
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

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Monday	Tuesday	Wednesday	Thursday	Friday
Office	Office	Office	Office	Office

[EnviroMail 148 Australia – Interpreting TOP Assay](#)

[EnviroMail 149 Australia - Net Zero commitments and roadmap](#)

[EnviroMail 150 Australia - Spotlight on emerging contaminants - Triclosan](#)

[EnviroMail 151 Australia - Expanding the scope of PFAS analysis in soils and waters](#)

[EnviroMail 152 Australia – Analysing Air & Gas with Canisters](#)

[EnviroMail 93 Australia Re-release - Laboratory quality assurance/quality control](#)

[REDACTED]
Sent: Tuesday, 24 June 2025 10:32 AM
[REDACTED]

Subject: [EXTERNAL] - Potential re-analysis request PFAS Williamtown

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

As we did for some samples last month, we may need to request re-analysis/re-batches for the more recent lot below. Can you confirm which of the samples below you have in storage still?

SampleCode	Lab Sampled Date	FieldID	Batch Number
ES2515730001	26/05/2025 10:10	0908_FOT365_250526	ES2515730
ES2515729001	27/05/2025 9:30	0908_MW144_250527	ES2515729
ES2515729002	27/05/2025 9:00	0908_MW536_250527	ES2515729
ES2515729003	27/05/2025 9:15	0908_MW537_250527	ES2515729
ES2517306001	10/06/2025 14:39	0908_MW142S_250610	ES2517306
ES2517306002	10/06/2025 14:44	0908_MW142D_250610	ES2517306
ES2517306003	10/06/2025 15:08	0908_MW538_250610	ES2517306
ES2517305002	10/06/2025 14:07	0908_MW262S_250610	ES2517305

Senior Environmental Scientist, ANZ NAC

AECOM

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PS: I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours.

CERTIFICATE OF ANALYSIS 378731-A

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	
Address	PO Box Q410, QVB Post Office, Sydney, NSW, 1230

Sample Details

Your Reference	<u>NSW_0908_PFASOMP_25</u>
Number of Samples	Additional analysis
Date samples received	27/04/2025
Date completed instructions received	30/04/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	06/05/2025
Date of Issue	06/05/2025
Reissue Details	This report replaces R00 created on 06/05/2025 due to: Project ID Amended (Client Request)
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

 Senior Chemist
 Asbestos Approved Identifier/Report coordinator
 Senior Chemist

Authorised By

 Laboratory Manager

PFAS in Soils Extended			
Our Reference		378731-A-2	378731-A-10
Your Reference	UNITS	0908_QC201_25 0402	0908_QC209_25 0407
Date Sampled		2/04/2025	7/04/2025
Type of sample		Soil	Soil
Date prepared	-	24/04/2025	24/04/2025
Date analysed	-	24/04/2025	24/04/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.9	0.6
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	12	12
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	<0.1	0.3
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1
N-Ethyl perfluorooctanesulfonamide	µg/kg	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2
Surrogate ¹³ C ₈ PFOS	%	99	100
Surrogate ¹³ C ₂ PFOA	%	101	105
Extracted ISTD ¹³ C ₃ PFBS	%	77	89
Extracted ISTD ¹⁸ O ₂ PFHxS	%	73	86
Extracted ISTD ¹³ C ₄ PFOS	%	74	87

PFAS in Soils Extended			
Our Reference		378731-A-2	378731-A-10
Your Reference	UNITS	0908_QC201_25 0402	0908_QC209_25 0407
Date Sampled		2/04/2025	7/04/2025
Type of sample		Soil	Soil
Extracted ISTD ¹³ C ₄ PFBA	%	76	92
Extracted ISTD ¹³ C ₃ PFPeA	%	77	90
Extracted ISTD ¹³ C ₂ PFHxA	%	74	88
Extracted ISTD ¹³ C ₄ PFHpA	%	74	89
Extracted ISTD ¹³ C ₄ PFOA	%	76	89
Extracted ISTD ¹³ C ₅ PFNA	%	80	90
Extracted ISTD ¹³ C ₂ PFDA	%	75	82
Extracted ISTD ¹³ C ₂ PFUnDA	%	84	97
Extracted ISTD ¹³ C ₂ PFDoDA	%	74	89
Extracted ISTD ¹³ C ₂ PFTeDA	%	87	114
Extracted ISTD ¹³ C ₂ 4:2FTS	%	87	98
Extracted ISTD ¹³ C ₂ 6:2FTS	%	129	115
Extracted ISTD ¹³ C ₂ 8:2FTS	%	121	105
Extracted ISTD ¹³ C ₈ FOSA	%	76	81
Extracted ISTD d ₃ N MeFOSA	%	72	88
Extracted ISTD d ₅ N EtFOSA	%	72	88
Extracted ISTD d ₇ N MeFOSE	%	73	82
Extracted ISTD d ₉ N EtFOSE	%	74	87
Extracted ISTD d ₃ N MeFOSAA	%	111	126
Extracted ISTD d ₅ N EtFOSAA	%	110	156
Total Positive PFHxS & PFOS	µg/kg	13	13
Total Positive PFOS & PFOA	µg/kg	12	12
Total Positive PFAS	µg/kg	13	13

Moisture			
Our Reference		378731-A-2	378731-A-10
Your Reference	UNITS	0908_QC201_25 0402	0908_QC209_25 0407
Date Sampled		2/04/2025	7/04/2025
Type of sample		Soil	Soil
Date prepared	-	23/04/2025	23/04/2025
Date analysed	-	24/04/2025	24/04/2025
Moisture	%	72	22

PFAS in Waters Extended						
Our Reference		378731-A-1	378731-A-5	378731-A-7	378731-A-8	378731-A-9
Your Reference	UNITS	0908_QC200_25 0401	0908_QC204_25 0403	0908_QC206_25 0404	0908_QC207_25 0404	0908_QC208_25 0407
Date Sampled		1/04/2025	3/04/2025	4/04/2025	4/04/2025	7/04/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Date analysed	-	24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Perfluorobutanesulfonic acid	µg/L	<0.01	<0.01	0.16	0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	<0.01	0.47	0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.02	0.05	11	0.14	0.02
Perfluoroheptanesulfonic acid	µg/L	<0.01	<0.01	0.79	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	0.04	0.16	69	0.07	0.03
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	0.1	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	0.31	<0.02	<0.02
Perfluorohexanoic acid	µg/L	<0.01	<0.01	1.8	0.02	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	<0.01	0.25	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	0.92	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate ¹³ C ₈ PFOS	%	80	98	93	97	96
Surrogate ¹³ C ₂ PFOA	%	102	99	98	101	97
Extracted ISTD ¹³ C ₃ PFBS	%	105	111	108	104	105
Extracted ISTD ¹⁸ O ₂ PFHxS	%	114	101	105	103	103
Extracted ISTD ¹³ C ₄ PFOS	%	105	101	79	98	99

PFAS in Waters Extended						
Our Reference		378731-A-1	378731-A-5	378731-A-7	378731-A-8	378731-A-9
Your Reference	UNITS	0908_QC200_25 0401	0908_QC204_25 0403	0908_QC206_25 0404	0908_QC207_25 0404	0908_QC208_25 0407
Date Sampled		1/04/2025	3/04/2025	4/04/2025	4/04/2025	7/04/2025
Type of sample		Water	Water	Water	Water	Water
Extracted ISTD ¹³ C ₄ PFBA	%	103	99	108	105	106
Extracted ISTD ¹³ C ₃ PFPeA	%	104	108	111	106	103
Extracted ISTD ¹³ C ₂ PFHxA	%	102	111	113	112	107
Extracted ISTD ¹³ C ₄ PFHpA	%	102	106	107	107	108
Extracted ISTD ¹³ C ₄ PFOA	%	105	108	108	103	105
Extracted ISTD ¹³ C ₅ PFNA	%	102	110	61	102	106
Extracted ISTD ¹³ C ₂ PFDA	%	104	108	108	102	92
Extracted ISTD ¹³ C ₂ PFUnDA	%	100	118	115	109	111
Extracted ISTD ¹³ C ₂ PFDoDA	%	98	103	109	101	97
Extracted ISTD ¹³ C ₂ PFTeDA	%	85	89	89	75	76
Extracted ISTD ¹³ C ₂ 4:2FTS	%	109	114	118	115	114
Extracted ISTD ¹³ C ₂ 6:2FTS	%	122	120	110	117	111
Extracted ISTD ¹³ C ₂ 8:2FTS	%	119	122	118	123	117
Extracted ISTD ¹³ C ₈ FOSA	%	111	107	113	106	109
Extracted ISTD d ₃ N MeFOSA	%	100	98	107	102	103
Extracted ISTD d ₅ N EtFOSA	%	93	94	98	93	94
Extracted ISTD d ₇ N MeFOSE	%	104	99	118	111	102
Extracted ISTD d ₉ N EtFOSE	%	98	95	106	103	102
Extracted ISTD d ₃ N MeFOSAA	%	116	146	120	119	133
Extracted ISTD d ₅ N EtFOSAA	%	115	113	112	112	108
Total Positive PFHxS & PFOS	µg/L	0.06	0.21	80	0.21	0.05
Total Positive PFOA & PFOS	µg/L	0.04	0.16	70	0.07	0.03
Total Positive PFAS	µg/L	0.06	0.21	85	0.26	0.05

PFAS in Waters Extended

Our Reference		378731-A-11	378731-A-15	378731-A-16	378731-A-17	378731-A-18
Your Reference	UNITS	0908_QC210_25 0407	0908_QC214_25 0410	0908_QC215_25 0410	0908_QC216_25 0411	0908_QC217_25 0416
Date Sampled		7/04/2025	10/04/2025	10/04/2025	11/04/2025	16/04/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Date analysed	-	24/04/2025	24/04/2025	24/04/2025	24/04/2025	24/04/2025
Perfluorobutanesulfonic acid	µg/L	0.02	<0.01	0.02	<0.01	0.02
Perfluoropentanesulfonic acid	µg/L	0.03	0.01	0.02	<0.01	0.02
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.49	0.25	0.25	0.01	0.13
Perfluoroheptanesulfonic acid	µg/L	0.04	0.05	0.02	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	2.0	0.86	0.67	<0.01	<0.01
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	0.08	0.03	0.04	<0.01	0.03
Perfluoroheptanoic acid	µg/L	0.01	<0.01	<0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	0.04	0.02	0.02	<0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Surrogate ¹³ C ₈ PFOS	%	98	99	98	100	97
Surrogate ¹³ C ₂ PFOA	%	100	99	98	101	98
Extracted ISTD ¹³ C ₃ PFBS	%	110	106	103	109	108
Extracted ISTD ¹⁸ O ₂ PFHxS	%	101	103	98	100	101
Extracted ISTD ¹³ C ₄ PFOS	%	97	98	97	96	99
Extracted ISTD ¹³ C ₄ PFBA	%	101	106	105	108	110

PFAS in Waters Extended						
Our Reference		378731-A-11	378731-A-15	378731-A-16	378731-A-17	378731-A-18
Your Reference	UNITS	0908_QC210_25 0407	0908_QC214_25 0410	0908_QC215_25 0410	0908_QC216_25 0411	0908_QC217_25 0416
Date Sampled		7/04/2025	10/04/2025	10/04/2025	11/04/2025	16/04/2025
Type of sample		Water	Water	Water	Water	Water
Extracted ISTD ¹³ C ₃ PFPeA	%	106	105	103	106	108
Extracted ISTD ¹³ C ₂ PFHxA	%	111	110	107	109	113
Extracted ISTD ¹³ C ₄ PFHpA	%	108	108	104	105	110
Extracted ISTD ¹³ C ₄ PFOA	%	106	105	106	104	108
Extracted ISTD ¹³ C ₅ PFNA	%	103	107	104	105	108
Extracted ISTD ¹³ C ₂ PFDA	%	101	92	99	95	100
Extracted ISTD ¹³ C ₂ PFUnDA	%	109	106	103	116	106
Extracted ISTD ¹³ C ₂ PFDoDA	%	102	100	97	101	103
Extracted ISTD ¹³ C ₂ PFTeDA	%	80	75	73	80	80
Extracted ISTD ¹³ C ₂ 4:2FTS	%	116	115	118	116	122
Extracted ISTD ¹³ C ₂ 6:2FTS	%	115	119	117	113	118
Extracted ISTD ¹³ C ₂ 8:2FTS	%	118	125	121	114	122
Extracted ISTD ¹³ C ₈ FOSA	%	108	108	107	109	109
Extracted ISTD d ₃ N MeFOSA	%	105	101	102	104	102
Extracted ISTD d ₅ N EtFOSA	%	94	91	89	94	93
Extracted ISTD d ₇ N MeFOSE	%	106	108	106	112	111
Extracted ISTD d ₉ N EtFOSE	%	106	104	105	108	106
Extracted ISTD d ₃ N MeFOSAA	%	129	132	130	124	128
Extracted ISTD d ₅ N EtFOSAA	%	106	106	109	109	112
Total Positive PFHxS & PFOS	µg/L	2.5	1.1	0.92	0.01	0.13
Total Positive PFOA & PFOS	µg/L	2.0	0.88	0.68	<0.01	<0.01
Total Positive PFAS	µg/L	2.7	1.2	1.0	0.01	0.21

PFAS in Waters Extended		
Our Reference		378731-A-19
Your Reference	UNITS	0908_QC218_25 0416
Date Sampled		16/04/2025
Type of sample		Water
Date prepared	-	24/04/2025
Date analysed	-	24/04/2025
Perfluorobutanesulfonic acid	µg/L	0.03
Perfluoropentanesulfonic acid	µg/L	0.04
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.89
Perfluoroheptanesulfonic acid	µg/L	0.03
Perfluorooctanesulfonic acid PFOS	µg/L	0.04
Perfluorodecanesulfonic acid	µg/L	<0.02
Perfluorobutanoic acid	µg/L	<0.02
Perfluoropentanoic acid	µg/L	<0.02
Perfluorohexanoic acid	µg/L	0.05
Perfluoroheptanoic acid	µg/L	0.01
Perfluorooctanoic acid PFOA	µg/L	0.05
Perfluorononanoic acid	µg/L	<0.01
Perfluorodecanoic acid	µg/L	<0.02
Perfluoroundecanoic acid	µg/L	<0.02
Perfluorododecanoic acid	µg/L	<0.05
Perfluorotridecanoic acid	µg/L	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5
4:2 FTS	µg/L	<0.01
6:2 FTS	µg/L	<0.01
8:2 FTS	µg/L	<0.02
10:2 FTS	µg/L	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02
Surrogate ¹³ C ₈ PFOS	%	96
Surrogate ¹³ C ₂ PFOA	%	100
Extracted ISTD ¹³ C ₃ PFBS	%	104
Extracted ISTD ¹⁸ O ₂ PFHxS	%	101
Extracted ISTD ¹³ C ₄ PFOS	%	100
Extracted ISTD ¹³ C ₄ PFBA	%	110

PFAS in Waters Extended		
Our Reference		378731-A-19
Your Reference	UNITS	0908_QC218_25 0416
Date Sampled		16/04/2025
Type of sample		Water
Extracted ISTD ¹³ C ₃ PFPeA	%	105
Extracted ISTD ¹³ C ₂ PFHxA	%	111
Extracted ISTD ¹³ C ₄ PFHpA	%	105
Extracted ISTD ¹³ C ₄ PFOA	%	105
Extracted ISTD ¹³ C ₅ PFNA	%	107
Extracted ISTD ¹³ C ₂ PFDA	%	94
Extracted ISTD ¹³ C ₂ PFUnDA	%	111
Extracted ISTD ¹³ C ₂ PFDoDA	%	99
Extracted ISTD ¹³ C ₂ PFTeDA	%	76
Extracted ISTD ¹³ C ₂ 4:2FTS	%	116
Extracted ISTD ¹³ C ₂ 6:2FTS	%	113
Extracted ISTD ¹³ C ₂ 8:2FTS	%	113
Extracted ISTD ¹³ C ₈ FOSA	%	109
Extracted ISTD d ₃ N MeFOSA	%	103
Extracted ISTD d ₅ N EtFOSA	%	93
Extracted ISTD d ₇ N MeFOSE	%	112
Extracted ISTD d ₉ N EtFOSE	%	106
Extracted ISTD d ₃ N MeFOSAA	%	131
Extracted ISTD d ₅ N EtFOSAA	%	109
Total Positive PFHxS & PFOS	µg/L	0.93
Total Positive PFOA & PFOS	µg/L	0.09
Total Positive PFAS	µg/L	1.2

PFAS in Water LOW LEVEL Extend						
Our Reference		378731-A-4	378731-A-6	378731-A-12	378731-A-13	378731-A-14
Your Reference	UNITS	0908_QC203_25 0403	0908_QC205_25 0403	0908_QC211_25 0409	0908_QC212_25 0409	0908_QC213_25 0410
Date Sampled		3/04/2025	3/04/2025	9/04/2025	9/04/2025	10/04/2025
Type of sample		Water	Water	Water	Water	Water
Date prepared	-	30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Date analysed	-	01/05/2025	01/05/2025	01/05/2025	01/05/2025	01/05/2025
Perfluorobutanesulfonic acid	µg/L	<0.001	<0.001	0.003	<0.001	<0.001
Perfluoropentanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.001	<0.001	0.007	<0.001	0.002
Perfluoroheptanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	0.004	<0.001	0.001	0.002	0.008
Perfluorodecanesulfonic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	µg/L	<0.01	<0.02	<0.02	<0.004	<0.01
Perfluoropentanoic acid	µg/L	<0.002	<0.004	<0.004	<0.002	<0.002
Perfluorohexanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoroheptanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanoic acid PFOA	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorononanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
8:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
10:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Surrogate ¹³ C ₈ PFOS	%	101	103	100	105	106
Surrogate ¹³ C ₂ PFOA	%	101	101	101	102	100
Extracted ISTD ¹³ C ₃ PFBS	%	60	65	58	65	66
Extracted ISTD ¹⁸ O ₂ PFHxS	%	134	137	130	120	120
Extracted ISTD ¹³ C ₄ PFOS	%	114	117	116	107	109

PFAS in Water LOW LEVEL Extend

Our Reference		378731-A-4	378731-A-6	378731-A-12	378731-A-13	378731-A-14
Your Reference	UNITS	0908_QC203_25 0403	0908_QC205_25 0403	0908_QC211_25 0409	0908_QC212_25 0409	0908_QC213_25 0410
Date Sampled		3/04/2025	3/04/2025	9/04/2025	9/04/2025	10/04/2025
Type of sample		Water	Water	Water	Water	Water
Extracted ISTD ¹³ C ₄ PFBA	%	30	#	20	42	27
Extracted ISTD ¹³ C ₃ PFPeA	%	51	45	46	61	57
Extracted ISTD ¹³ C ₂ PFHxA	%	71	73	74	75	76
Extracted ISTD ¹³ C ₄ PFHpA	%	82	96	93	94	92
Extracted ISTD ¹³ C ₄ PFOA	%	122	132	127	121	121
Extracted ISTD ¹³ C ₅ PFNA	%	131	144	138	130	131
Extracted ISTD ¹³ C ₂ PFDA	%	158	161	152	140	145
Extracted ISTD ¹³ C ₂ PFUnDA	%	157	158	154	145	143
Extracted ISTD ¹³ C ₂ PFDoDA	%	147	156	146	147	147
Extracted ISTD ¹³ C ₂ PFTeDA	%	165	164	129	166	113
Extracted ISTD ¹³ C ₂ 4:2FTS	%	137	141	142	136	137
Extracted ISTD ¹³ C ₂ 6:2FTS	%	#	#	#	174	#
Extracted ISTD ¹³ C ₂ 8:2FTS	%	#	#	#	#	#
Extracted ISTD ¹³ C ₈ FOSA	%	#	25	118	50	112
Extracted ISTD d ₃ N MeFOSA	%	98	97	103	101	102
Extracted ISTD d ₅ N EtFOSA	%	92	91	94	91	92
Extracted ISTD d ₇ N MeFOSE	%	99	91	106	106	110
Extracted ISTD d ₉ N EtFOSE	%	92	88	103	103	107
Extracted ISTD d ₃ N MeFOSAA	%	#	#	#	#	198
Extracted ISTD d ₅ N EtFOSAA	%	#	#	#	#	#
Total Positive PFHxS & PFOS	µg/L	0.005	<0.001	0.008	0.002	0.010
Total Positive PFOA & PFOS	µg/L	0.004	<0.001	0.001	0.002	0.008
Total Positive PFAS	µg/L	0.005	<0.001	0.011	0.002	0.010

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PFAS in Soils Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	378731-A-10
Date prepared	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	24/04/2025
Date analysed	-			24/04/2025	[NT]	[NT]	[NT]	[NT]	24/04/2025	24/04/2025
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	102
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	104	107
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	101	103
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	106
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	135
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	107	110
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	98	99
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	107	110
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	104
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	102
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	104
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	101	99
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	102	104
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	103	102
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	98	104
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	97	101
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	95	94
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	99
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	99
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	98	96
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	101	131
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	101	106
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	107	104
N-Ethyl perfluorooctanesulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	102	101
N-Me perfluorooctanesulfonamid oethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	107	109
N-Et perfluorooctanesulfonamid oethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	105	106
MePerfluorooctanesulf- amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	106	107
EtPerfluorooctanesulf amid oacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	103	107
Surrogate ¹³ C ₈ PFOS	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	103	101
Surrogate ¹³ C ₂ PFOA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	100	105

QUALITY CONTROL: PFAS in Soils Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	378731-A-10
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	99	87
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	99	86
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	97	85
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	103	91
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	101	90
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	103	91
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	99	90
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	105	90
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	102	94
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	99	84
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	106	105
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	108	96
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	124	[NT]	[NT]	[NT]	[NT]	122	118
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	103	97
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	104	119
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	108	123
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	105	81
Extracted ISTD d ₃ N MeFOSA	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	102	86
Extracted ISTD d ₅ N EtFOSA	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	105	87
Extracted ISTD d ₇ N MeFOSE	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	101	86

QUALITY CONTROL: PFAS in Soils Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	378731-A-10
<i>Extracted ISTD d₉ N EtFOSE</i>	%		Org-029	97	[NT]	[NT]	[NT]	[NT]	102	87
<i>Extracted ISTD d₃ N MeFOSAA</i>	%		Org-029	120	[NT]	[NT]	[NT]	[NT]	104	127
<i>Extracted ISTD d₅ N EtFOSAA</i>	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	109	157

QUALITY CONTROL: PFAS in Waters Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			24/04/2025	1	24/04/2025	24/04/2025		24/04/2025	[NT]
Date analysed	-			24/04/2025	1	24/04/2025	24/04/2025		24/04/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	93	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	90	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	1	0.02	0.02	0	93	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	92	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	1	0.04	0.04	0	93	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	93	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	93	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	96	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	96	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	94	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	93	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	93	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	95	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	92	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	99	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	85	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	1	<0.5	<0.5	0	96	[NT]
4:2 FTS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	90	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	91	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	92	[NT]
10:2 FTS	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	102	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	98	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	94	[NT]
N-Ethyl perfluorooctanesulfonamide	µg/L	0.1	Org-029	<0.1	1	<0.1	<0.1	0	91	[NT]
N-Me perfluorooctanesulfonamidethanol	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	105	[NT]
N-Et perfluorooctanesulfonamidethanol	µg/L	0.5	Org-029	<0.5	1	<0.5	<0.5	0	96	[NT]
MePerfluorooctanesulfonamidacetic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	99	[NT]
EtPerfluorooctanesulfonamidacetic acid	µg/L	0.02	Org-029	<0.02	1	<0.02	<0.02	0	94	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	96	1	80	80	0	94	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	94	1	102	101	1	94	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	98	1	105	101	4	96	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	99	1	114	110	4	101	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	100	1	105	105	0	101	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	104	1	103	102	1	102	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	103	1	104	103	1	103	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	104	1	102	101	1	101	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	99	1	102	102	0	99	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	107	1	105	107	2	104	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	105	1	102	103	1	101	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	104	1	104	99	5	103	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	111	1	100	101	1	108	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	105	1	98	106	8	100	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	95	1	85	85	0	96	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	105	1	109	109	0	104	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	106	1	122	126	3	104	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	109	1	119	124	4	109	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	106	1	111	109	2	104	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	100	1	100	99	1	97	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	98	1	93	93	0	96	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	104	1	104	101	3	100	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	98	1	98	98	0	98	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	114	1	116	119	3	117	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	108	1	115	116	1	106	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			30/04/2025	[NT]	[NT]	[NT]	[NT]	30/04/2025	[NT]
Date analysed	-			01/05/2025	[NT]	[NT]	[NT]	[NT]	01/05/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	115	[NT]
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	86	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorobutanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluoropentanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	90	[NT]
Perfluorohexanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoroheptanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorononanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	83	[NT]
Perfluorodecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoroundecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluorododecanoic acid	µg/L	0.005	Org-029	<0.005	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorotridecanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	127	[NT]
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	91	[NT]
4:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	95	[NT]
6:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	107	[NT]
8:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	100	[NT]
10:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	113	[NT]
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	110	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	119	[NT]
N-Ethyl perfluorooctanesulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	135	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	112	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	128	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	115	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	122	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	103	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	66	[NT]	[NT]	[NT]	[NT]	63	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	79	[NT]	[NT]	[NT]	[NT]	89	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	75	[NT]	[NT]	[NT]	[NT]	83	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	74	[NT]	[NT]	[NT]	[NT]	96	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	122	[NT]	[NT]	[NT]	[NT]	123	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	128	[NT]	[NT]	[NT]	[NT]	133	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	160	[NT]	[NT]	[NT]	[NT]	168	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	78	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	109	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	151	[NT]	[NT]	[NT]	[NT]	141	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

From:
Sent:
To:
Cc:
Subject:

Wednesday, 30 April 2025 3:50 PM

RE: Sample Receipt for 378731 NSW_0908_PFASMGMT_25

We can get that out on standard turnaround, due 7/5.

Thanks,

Kind Regards,

| Customer Service | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200

E www.envirolab.com.au

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Samples will be analysed per our T&C's.

Sent: Wednesday, 30 April 2025 1:47 PM

Subject: RE: Sample Receipt for 378731 NSW_0908_PFASMGMT_25

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

We need all the samples in one work order please, so if you need to do a new work-order number please carry across the other samples too. For the 5 samples, we don't want to see a duplication, we just want to LL analysis reported.

We also don't want to pay for a 25% surcharge. Without that, when would you be delivering?

Cheers

Senior Environmental Scientist, ANZ NAC
M +61 402 163 223

AECOM
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ELI REF: 378731-A

TTT STANDARD

DUE: 7/5/25

AB-

I acknowledge the Traditional Custodians of the Country on which we work and learn every day, and pay my respects to Elders past, present, and future.

PS: I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours.

[REDACTED]
Sent: Wednesday, 30 April 2025 1:13 PM

[REDACTED]
Subject: RE: Sample Receipt for 378731 NSW_0908_PFASMGMT_25

[REDACTED]
We'd get this organised into a separate A-job.
It'd be \$172.82/sample + \$35 admin + GST.

We can get results out to you by Fri 2/5 with extra 25% surcharge. Are you happy to go ahead?

Thanks,

Kind Regards,

[REDACTED] | Customer Service | Envirolab Services

Great Science. Great Service.

12 Ashley Street Chatswood NSW 2067
T 612 9910 6200

E [REDACTED] W www.envirolab.com.au

Follow us on: [LinkedIn](#) | [Facebook](#) | [Twitter](#)

Samples will be analysed per our T&C's.

[REDACTED]
Sent: Wednesday, 30 April 2025 11:45 AM

[REDACTED]
Subject: RE: Sample Receipt for 378731 NSW_0908_PFASMGMT_25

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Envirolab team,

As discussed over the phone with [REDACTED] this morning, we scheduled the incorrect analysis for five samples in this work order and we would like to request new analysis to be completed.

Instead of standard LOR (which is the analysis that was completed) we needed **Low Level for PFAS Extended Suite 28 analytes [E08550]** for the following 5 samples:

- 4 • 0908_QC203_250403
- 6 • 0908_QC205_250403
- 12 • 0908_QC211_250409
- 13 • 0908_QC212_250409
- 14 • 0908_QC213_250410

Can you confirm if:

- A) you can complete this analysis with the water volume you have left
- B) this would incur in extra cost of 5 x \$173 in addition to current invoice
- C) you can update the result report with the updated analysis (no longer the standard LOR but the Low-level LOR results) and by when.

Kind regards,

Senior Environmental Scientist, ANZ NAC
M +61 402 163 223

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I acknowledge the Traditional Custodians of the Country on which we work and learn every day, and pay my respects to Elders past, present, and future.

PS: I work flexibly. I'm sending this message now because it's a good time for me, but I don't expect you to read, respond or action it outside your own regular working hours.

Sent: Tuesday, 22 April 2025 2:24 PM

Subject: Sample Receipt for 378731 NSW_0908_PFASMGMT_25

Please refer to attached for:
a copy of the COC/paperwork received from you
a copy of our Sample Receipt Advice (SRA)
Please open and read the SRA as it contains important information.
Please let the lab know immediately if there are any issues.

Results will be available by 6.30pm on the date indicated.

PLEASE NOTE COMBO PRICES WILL ONLY APPLY IF COMBOS ARE SELECTED ON COC.

We have a new reporting format and would welcome your feedback. Sydney@envirolab.com.au

Please note that subcontracted testing or non routine testing may take significantly longer than just the standard 5 day TAT, contact the lab to get an approximate due date.

Enquiries should be made directly to:
customerservice@envirolab.com.au

Regards

Envirolab Services
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Kind Regards,

SAMPLE RECEIPT ADVICE

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	

Sample Login Details

Your reference	NSW_0908_PFASOMP_25
Envirolab Reference	378731-A
Date Sample Received	27/04/2025
Date Instructions Received	30/04/2025
Date Results Expected to be Reported	06/05/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	Additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	6.3
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email:	Email:

Analysis Underway, details on the following page:

Sample ID	AECOM checks	AECOM checks	AECOM checks	AECOM checks	PFAS in Soils Extended	PFAS in Waters Extended	PFAS in Water LOW LEVEL Extend	On Hold
0908_QC200_250401	✓	✓	✓	✓		✓		
0908_QC201_250402	✓	✓	✓	✓	✓			
0908_QC202_250402								✓
0908_QC203_250403	✓	✓	✓	✓			✓	
0908_QC204_250403	✓	✓	✓	✓		✓		
0908_QC205_250403	✓	✓	✓	✓			✓	
0908_QC206_250404	✓	✓	✓	✓		✓		
0908_QC207_250404	✓	✓	✓	✓		✓		
0908_QC208_250407	✓	✓	✓	✓		✓		
0908_QC209_250407	✓	✓	✓	✓	✓			
0908_QC210_250407	✓	✓	✓	✓		✓		
0908_QC211_250409	✓	✓	✓	✓			✓	
0908_QC212_250409	✓	✓	✓	✓			✓	
0908_QC213_250410	✓	✓	✓	✓			✓	
0908_QC214_250410	✓	✓	✓	✓		✓		
0908_QC215_250410	✓	✓	✓	✓		✓		
0908_QC216_250411	✓	✓	✓	✓		✓		
0908_QC217_250416	✓	✓	✓	✓		✓		
0908_QC218_250416	✓	✓	✓	✓		✓		

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

CERTIFICATE OF ANALYSIS 381865

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	
Address	PO Box Q410, QVB Post Office, Sydney, NSW, 1230

Sample Details

Your Reference	<u>NSW_0908_PFASOMP_25</u>
Number of Samples	1 Water
Date samples received	29/05/2025
Date completed instructions received	29/05/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	05/06/2025
Date of Issue	05/06/2025
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Senior Chemist
Asbestos Approved Identifier/Report coordinator

Authorised By

Laboratory Manager

PFAS in Water LOW LEVEL Extend		
Our Reference		381865-1
Your Reference	UNITS	0908_QC219_25 0527
Date Sampled		27/05/2025
Type of sample		Water
Date prepared	-	03/06/2025
Date analysed	-	03/06/2025
Perfluorobutanesulfonic acid	µg/L	<0.001
Perfluoropentanesulfonic acid	µg/L	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.001
Perfluoroheptanesulfonic acid	µg/L	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.001
Perfluorodecanesulfonic acid	µg/L	<0.002
Perfluorobutanoic acid	µg/L	<0.002
Perfluoropentanoic acid	µg/L	<0.002
Perfluorohexanoic acid	µg/L	<0.001
Perfluoroheptanoic acid	µg/L	<0.001
Perfluorooctanoic acid PFOA	µg/L	<0.001
Perfluorononanoic acid	µg/L	<0.001
Perfluorodecanoic acid	µg/L	<0.002
Perfluoroundecanoic acid	µg/L	<0.002
Perfluorododecanoic acid	µg/L	<0.005
Perfluorotridecanoic acid	µg/L	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05
4:2 FTS	µg/L	<0.001
6:2 FTS	µg/L	<0.001
8:2 FTS	µg/L	<0.002
10:2 FTS	µg/L	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002
Surrogate ¹³ C ₈ PFOS	%	95
Surrogate ¹³ C ₂ PFOA	%	92
Extracted ISTD ¹³ C ₃ PFBS	%	74
Extracted ISTD ¹⁸ O ₂ PFHxS	%	122
Extracted ISTD ¹³ C ₄ PFOS	%	119

PFAS in Water LOW LEVEL Extend		
Our Reference		381865-1
Your Reference	UNITS	0908_QC219_25 0527
Date Sampled		27/05/2025
Type of sample		Water
Extracted ISTD ¹³ C ₄ PFBA	%	43
Extracted ISTD ¹³ C ₃ PFPeA	%	59
Extracted ISTD ¹³ C ₂ PFHxA	%	87
Extracted ISTD ¹³ C ₄ PFHpA	%	89
Extracted ISTD ¹³ C ₄ PFOA	%	129
Extracted ISTD ¹³ C ₅ PFNA	%	111
Extracted ISTD ¹³ C ₂ PFDA	%	128
Extracted ISTD ¹³ C ₂ PFUnDA	%	128
Extracted ISTD ¹³ C ₂ PFDoDA	%	105
Extracted ISTD ¹³ C ₂ PFTeDA	%	90
Extracted ISTD ¹³ C ₂ 4:2FTS	%	103
Extracted ISTD ¹³ C ₂ 6:2FTS	%	#
Extracted ISTD ¹³ C ₂ 8:2FTS	%	184
Extracted ISTD ¹³ C ₈ FOSA	%	118
Extracted ISTD d ₃ N MeFOSA	%	98
Extracted ISTD d ₅ N EtFOSA	%	97
Extracted ISTD d ₇ N MeFOSE	%	95
Extracted ISTD d ₉ N EtFOSE	%	96
Extracted ISTD d ₃ N MeFOSAA	%	168
Extracted ISTD d ₅ N EtFOSAA	%	173
Total Positive PFHxS & PFOS	µg/L	<0.001
Total Positive PFOA & PFOS	µg/L	<0.001
Total Positive PFAS	µg/L	<0.001

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.4 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			03/06/2025	[NT]	[NT]	[NT]	[NT]	03/06/2025	[NT]
Date analysed	-			03/06/2025	[NT]	[NT]	[NT]	[NT]	03/06/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	82	[NT]
Perfluorobutanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluoropentanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorohexanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoroheptanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	109	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluorononanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	94	[NT]
Perfluorodecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoroundecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorododecanoic acid	µg/L	0.005	Org-029	<0.005	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluorotridecanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	78	[NT]
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	89	[NT]
4:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	106	[NT]
6:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	113	[NT]
8:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	95	[NT]
10:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	83	[NT]
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	97	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	78	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	97	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	97	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	89	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	68	[NT]	[NT]	[NT]	[NT]	68	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	89	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	75	[NT]	[NT]	[NT]	[NT]	81	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	81	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	85	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	92	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	55	[NT]	[NT]	[NT]	[NT]	51	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	136	[NT]	[NT]	[NT]	[NT]	149	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	136	[NT]	[NT]	[NT]	[NT]	138	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	89	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	95	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	142	[NT]	[NT]	[NT]	[NT]	156	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

SAMPLE RECEIPT ADVICE

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	

Sample Login Details

Your reference	NSW_0908_PFASOMP_25
Envirolab Reference	381865
Date Sample Received	29/05/2025
Date Instructions Received	29/05/2025
Date Results Expected to be Reported	05/06/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3.0
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone:		Phone:	
Fax:		Fax:	
Email:		Email:	

Analysis Underway, details on the following page:

Sample ID	AECOM checks	AECOM checks	AECOM checks	AECOM checks	PFAS in Water LOW LEVEL Extend
0908_QC219_250527	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

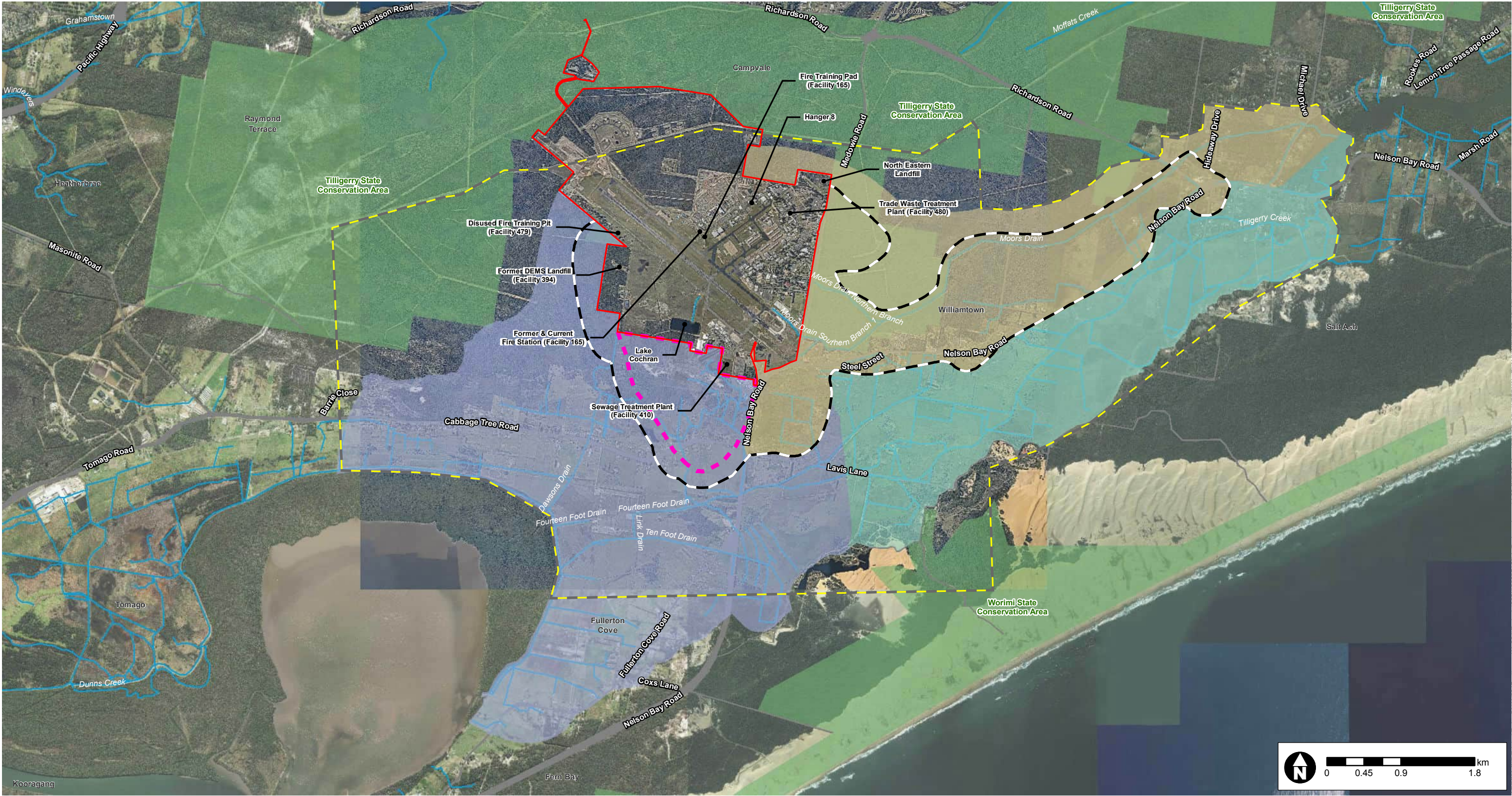
Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Appendix F

Supporting Maps



KEY

- RAAF Base Williamtown
- NSW EPA Investigation Area
- State Conservation Area
- Off-Site Open Channel

Groundwater Areas

- Eastern Area
- Southern Area

Surface Water Regions

- Region 1
- Region 2
- Region 3

AECOM

SCALE
1:46,000

SHEET
1 of 1

TITLE
Figure F2: Assessment Areas and Regions Considered in 2017 HHRA

PROJECT
RAAF BASE WILLIAMTOWN STAGE 2B ENVIRONMENTAL INVESTIGATION
OFF-SITE HUMAN HEALTH RISK ASSESSMENT – 2017

CLIENT
DEPARTMENT OF DEFENCE

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SHEET
1 of 1

COORDINATE SYSTEM
GDA 1994 MGA Zone 56

FIGURE
A3



KEY

RAAF Base Williamtown

NSW EPA Investigation Area

State Conservation Area

Off-Site Open Channel

Risk Zone A

Risk Zone B

Risk Zone C

Risk Zone D

AECOM

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SHEET
1 of 1

TITLE
Figure F19: Risk Zones

PROJECT
RAAF BASE WILLIAMTOWN STAGE 2B ENVIRONMENTAL
INVESTIGATION
OFF-SITE HUMAN HEALTH RISK ASSESSMENT – 2017

CLIENT
DEPARTMENT OF DEFENCE

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Appendix H OMP Sampling Event Reports

Sampling Event Report, October 2025

PFAS OMP - RAAF Base Williamtown, 15-Dec-2025

Sampling Event Report, October 2025

PFAS OMP - RAAF Base Williamtown

15-Dec-2025

Doc No. 60739111_OMP_WLM_EventReport_Rev0_251215

Quality Information

Document Sampling Event Report, October 2025
Ref 60739111
Date 15-Dec-2025

Revision History

Rev	Revision Date	Details
0	15-Dec-2025	Final

Sampling Event Report, October 2025

PFAS OMP - RAAF Base Williamtown

Client: Department of Defence

ABN: 68706814312

Prepared by

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15-Dec-2025

Job No.: 60739111

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 and ISO45001.

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List of Acronyms

Acronym	Term
ADWG	Australian Drinking Water Guidelines
AECOM	AECOM Australia Pty Ltd
AFFF	Aqueous Film Forming Foam
Defence	Department of Defence
DoH	Department of Health
DQI	Data Quality Indicator
DQO	Data Quality Objective
EPC	Exposure Point Concentration
FSANZ	Food Standards Australia New Zealand
HEPA	Heads of Environment Protection Authority
LOR	Limit of Reporting
MW	Monitoring Well
NATA	National Analytical Testing Authority
NEMP	National Environmental Management Plan
NEPC	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health and Medical Research Council
NSW	New South Wales
OMP	Ongoing Monitoring Plan
OMR	Ongoing Monitoring Report
ORP	Oxidation-Reduction Potential
PFAS	Per- and poly-fluoroalkyl substances
PFBS	Perfluorobutane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PMAP	PFAS Management Area Plan
QA/QC	Quality Assurance and Quality Control
RPD	Relative Percentage Difference
SAQP	Sampling and Analysis Quality Plan
SD	Sediment
SER	Sampling Event Report
SW	Surface Water
TOC	Top of Casing

List of Units

Units	Term
°C	Degrees Celsius
µg/L	Micrograms per Litre
µS/cm	MicroSiemens per centimetre
g	Grams
km	Kilometre
L	Litre
m	Metre
mAHD	Metres Australian Height Datum
mbgl	Metres below ground level
mbTOC	Metres below Top of Casing
mg/kg	Milligrams per kilogram
mg/L	Milligrams per Litre
mV	MilliVolts

1.0 Introduction

1.1 General

AECOM Australia Pty Ltd (AECOM) has been engaged by the Department of Defence (Defence) to implement the per- and poly-fluoroalkyl substances (PFAS) Ongoing Monitoring Plan (OMP) at RAAF Base Williamtown (the 'base,' Site ID 0908) and the Williamtown Management Area in New South Wales (NSW). The location of the base and Management Area is shown in **Figure F1** in **Appendix A**.

The OMP (Defence, 2023b) outlines the sampling requirements for the base and off-base areas within the Management Area.

Following each sampling event, a Sampling Event Report (SER) will be prepared. An Ongoing Monitoring Report (OMR) will be prepared following the completion of each 12-month sampling period.

This SER has been prepared to report the results of the 2025 bi-annual sampling event conducted in October 2025. This SER compares the data collected during this event against specific triggers defined in the OMP (Defence, 2023b), including highlighting first-time detections and/or new exceedances of human health Australian guideline values, namely for perfluorooctane sulfonic acid (PFOS), perfluorohexane sulfonic acid (PFHxS), perfluorooctanoic acid (PFOA) and perfluorobutane sulfonic acid (PFBS).

This SER has been prepared in accordance with the Defence *Ongoing Monitoring Program Reporting - Guidance* issued in February 2024 (Defence, 2024).

1.2 Objectives

The objectives of this monitoring event were to:

- implement the OMP (Defence, 2023b); and
- collect data that will enable Defence to maintain an up to date understanding of the distribution, concentration, transport, and transformation of PFAS.

The data collected may be used to inform where new risk management actions may be required, or to support a determination that remediation has been completed so far as reasonably practicable, including updates and revisions to the PFAS Management Area Plan (PMAP) (Defence, 2023a).

The objective of this phase of works was to implement the scope of works for the bi-annual sampling event in accordance with the Sampling and Analysis Quality Plan (SAQP) (AECOM, 2025).

2.0 Scope of Work

The scope of work was completed in general accordance with the SAQP (AECOM, 2025), as follows:

- obtain permission (where required) to conduct works at the base, off-base publicly accessible areas and at private properties
- groundwater sampling and collection of water quality parameters at 61 of 74 scheduled monitoring wells and bores (refer to **Table 1** below, and **Figure F2** in **Appendix A** for specific locations)
- groundwater sampling and collection of water quality parameters at 10 of 12 ad hoc monitoring well and bore locations (refer to **Table 1** below, and **Figures F2-1** to **F2-4** in **Appendix A** for specific locations). These locations were added to the SAQP (AECOM, 2025) for the purpose of delineation of PFAS at low level of detection during this bi-annual sampling event. These locations will subsequently be reviewed for potential inclusion in the OMP.
- surface water sampling and collection of water quality parameters at 24 of 25 scheduled surface water locations (refer to **Table 2** below and **Figure F3** in **Appendix A** for specific locations).
- sediment sampling at 25 of 26 scheduled sediment locations (refer to **Table 3** below and **Figure F4** in **Appendix A** for specific locations)
- gauging of groundwater levels in monitoring wells prior to collection of samples and for targeted gauging event (refer to **Table 5** in **Section 4.1** for the targeted gauging event locations)
- collection of field duplicate samples at a rate of 1 in 10 primary samples for water
- collection of field duplicate samples at a rate of 1 in 20 primary samples for sediment
- analysis of samples from 83 of 88 scheduled sampling locations for PFAS full suite at the standard limit of reporting (LOR) and analysis of samples from 37 of 49 scheduled sampling locations for PFAS full suite at the low level LOR
- data management of the OMP field and laboratory data in Defence ESdat database
- preparation of this SER.

The deviations from the scheduled scope of works are discussed in detail in **Section 3.0**.

Note: due to privacy considerations, selected monitoring locations are unable to be shown on the figures in **Appendix A**.

Table 1 Groundwater Sampling Locations

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
On-base	Former DEMS Landfill (Facility 394)	MW172, MW240D, MW281S, MW282S, MW329, MW340D, MW340S, MW342D, MW344D, MW344S, MW354	Standard	11
	Former Fire Training Area (Facility 479)	MW166, MW167, MW168, MW169D, MW169S	Standard	5
	Lake Cochran	MW108D, MW108S, MW109D, MW175D, MW466, MW468	Standard	6
	Trade Waste Treatment (Facility 480)	MW106D, MW106S	Standard	2
Off-base	Cabbage Tree Road	MW126S, MW178	Standard	2
		MW125D, MW125S, MW126D, MW139, MW230S, MW238D*, MW238S*, POT085* <i>Ad hoc location: MW137</i>	Low Level	9

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
	East of Site - HWC Pump Station 9 (PS9)	MW132D, MW132I, MW829	Standard	3
		MW130D*, MW130S*, MW160	Low Level	3
	East of Site - Moors Drain	MW247D, MW247S	Standard	2
	Fullerton Cove	MW231S, POT236*	Standard	2
		MW231D, MW232D, MW232S, MW270D, MW270S, POT382 <i>Ad hoc locations: MW142D, MW142S, MW144, MW266D*, MW266S, MW536, MW537, MW538, POT365</i>	Low Level	15
	Lavis Lane	MW279S	Standard	1
		MW128D, MW128S	Low Level	2
	North of Site - Background	MW264D, MW264S	Low Level	2
	Salt Ash	MW252S* <i>Ad hoc locations: MW165*, MW262S</i>	Low Level	3
	Southern Area	MW177, MW185S*, MW220S, MW731D, MW731S	Standard	5
	Southern Area – Cabbage Tree Road	MW146AD, MW146S, MW271D, MW271S , MW278D, MW278S	Low Level	6
	West of Site	MW107D*, MW107S*, MW241D, MW241S, MW280S*, MW315D*, MW315S*	Low Level	7
Total				86
* Location not sampled Bold text denotes residential private property location				

Table 2 Surface Water Sampling Locations

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
On-base	Dawsons Drain (Lake Cochran)	SW055	Standard	1
	Lake Cochran	SW108, SW110		2
	Moors Drain Catchment	SW582, SW588		2
	On-base Drain (East of Former DEMS Landfill)	SW048		1
	On-base Drain (North of Lake Cochran)	SW047		1
Off-base	Dawsons Drain	SW059, SW060, SW333	Standard	3
	Fourteen Foot Drain	SW062, SW600		2
	Fullerton Cove Ring Drain	SW259		1

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
	Moors Drain	SW001, SW005, SW006, SW007, SW009, SW011*, SW014		7
	Ten Foot Drain	SW081		1
	Tilligerry Creek	SW019 , SW023, SW024, SW079		4
Total				25
* Location not sampled				
Bold text denotes residential private property location				

Table 3 Sediment Sampling Locations

On/Off-base	Area	Sampling Location	PFAS Analysis LOR	Total
On-base	Dawsons Drain (Lake Cochran)	SD055	Standard	1
	Lake Cochran	SD108, SD110		2
	On-base Drain (East of Former DEMS Landfill)	SD048		1
	On-base Drain (North of Lake Cochran)	SD047		1
Off-base	Dawsons Drain	SD059, SD060, SD333	Standard	3
	Fourteen Foot Drain	SD062, SD600		2
	Fullerton Cove (tidal gate outlet)	SD254, SD255, SD326		3
	Fullerton Cove Ring Drain	SD259		1
	Moors Drain	SD001, SD005, SD006, SD007, SD009, SD011*, SD014		7
	Ten Foot Drain	SD081		1
	Tilligerry Creek	SD019 , SD023, SD024, SD079		4
Total				26
* Location not sampled				
Bold text denotes residential private property location				

3.0 Deviations from the SAQP

The bi-annual sampling event was completed in general accordance with the SAQP (AECOM, 2025). Deviations from the SAQP are provided in **Table 4** below.

Table 4 Deviations from SAQP

SAQP Deviation	Comment / Justification	Impact on Dataset
Samples, and associated field parameters, were not collected from 13 of the 74 scheduled bi-annual groundwater sampling locations.	MW238D, MW238S, POT085 and POT236 (groundwater sampling locations at private residential properties) were not sampled as access approval from property owners were not received within the sampling period. MW107D, MW107S, MW130D, MW130S, MW252S, MW280S, MW315D, MW315S (located on Hunter Water land) were not sampled due to flood water covering the monitoring wells. The locations were visited on separate occasions during the sampling event; however the flood water had not subsided. MW185S (located at Newcastle Airport) was not sampled as it was covered by a stockpile.	The lack of sampling data at MW238D and MW238S is not considered to present a significant data gap given that PFAS has not previously been detected in these wells, and as nearby monitoring wells (MW139 to the west southwest and MW178 to the southeast) were able to be sampled during this event. The lack of sampling data at POT085 is not considered to be a significant data gap as concentrations at this location have been consistently below the laboratory LOR since 2019, and the concentrations in the closest up-hydraulic gradient monitoring well (MW139) were below the laboratory LOR during this event (consistent with previous results). POT236 has not been sampled since May 2023. Based on the understanding of the CSM, data from POT236 is not critical for monitoring the extent of the leading edge of the plume from the Central Region and is therefore not considered to be a significant data gap. The lack of sampling data at MW107D, MW107S, MW238D, MW238S, MW280S, MW315D and MW315S in the Western Region are not considered to present a significant data gap as monitoring wells MW139, MW241D and MW241S (cross gradient) and MW177, MW125D and MW125S (down gradient) were able to be sampled during the current event and all reported PFAS concentrations within the historical range. The lack of sampling data at MW185S in the Central Region is not considered to be a significant data gap given that down-hydraulic

SAQP Deviation	Comment / Justification	Impact on Dataset
		gradient well MW220S (also on airport land) was able to be sampled with concentrations of PFAS reported within the historical range. The lack of sampling data at MW130D and MW130S in the eastern region are not considered to be a significant data gap as nearby, down-hydraulic gradient wells MW829, MW132I and MW132D were able to be sampled during the current event and PFAS concentrations were reported within the historical range at these locations. The lack of sampling data at MW252S in the Eastern Region is not considered a significant data gap as nearby monitoring well MW123 was able to be sampled during this event and reported concentrations of PFAS within the historical range.
Samples, and associated field parameters, were not collected from two of the 12 planned ad hoc groundwater sampling locations.	MW266D (groundwater monitoring well located on residential property) was not sampled as the gate bolts were rusted and the well could not be accessed. Note that MW266D had been added to the scope as an ad hoc location and had not been sampled since 2021. MW165 (groundwater monitoring well on the road verge) was not sampled as the well could not be located due to overgrown grass. Note that MW165 had been added to the scope as an ad hoc location and had not been sampled since 2019.	The lack of sampling data at MW266D is not considered to be a significant data gap given that the purpose of sampling of these 12 ad hoc locations was to assess the extent of the groundwater plume to concentrations below the updated NHMRC (2025) drinking water guidelines. Given that concentrations of PFOS and PFHxS have historically been above the updated guidelines at MW266D, it is likely that the concentrations would continue to exceed the guidelines at this location. The lack of sampling data at MW165 is not considered to be a significant data gap as this is an ad hoc location and nearby monitoring wells (MW260D and MW260S to the west and MW262S to the northeast) were able to be sampled during the current round.
Samples, and associated field parameters, were not collected from one of	SW011 (Moors Drain surface water sampling location on Hunter Water land) was not sampled as the sampling location was unable to be	The lack of sampling data at SW011 is not considered to present a significant data gap given that samples were collected upstream

SAQP Deviation	Comment / Justification	Impact on Dataset
the 25 planned surface water sampling locations.	accessed due to floodwaters. The locations were visited on separate occasions during the sampling event; however, the flood water had not subsided.	(SW009) and downstream (SW014) of this location during this event. Furthermore, it is noted that historical PFAS concentrations at this location have remained consistent (within same order of magnitude) since 2016, with temporal fluctuations.
Samples, and associated field parameters, were not collected from one of the 26 planned sediment sampling locations.	SD011 (sediment sampling location on Hunter Water land) was not sampled as the sampling location was unable to be accessed due to floodwaters. The locations were visited on separate occasions during the sampling event; however, the flood water had not subsided.	The lack of sampling data at SD011 is not considered to represent a significant data gap given that samples were collected upstream (SD009) and downstream (SD014) of this location during this event. Furthermore, it is noted that historical PFAS concentrations have remained consistent (within same order of magnitude) since 2016, with temporal fluctuations.
Field parameters were partially collected from one of the planned 25 surface water sampling locations	SW001 was sampled, however due to an equipment error, the dissolved oxygen field parameter data taken at the time of sampling was lost.	The lack of dissolved oxygen parameter data is not considered to be a significant data gap, given that historical field data has been collected.

4.0 Methodology

4.1 Sampling Methodology

The methodology used for the bi-annual sampling event was in general accordance with the SAQP (AECOM, 2025) and is summarised in **Table 5** below.

Table 5 Sampling Methodology

Item	Details
Groundwater gauging	The depth to groundwater was measured in each monitoring well immediately prior to collection of groundwater samples (where sampling was required) using an interface probe. In addition, a targeted gauging round at 29 selected monitoring wells was completed to generate data for the groundwater elevation contours and assess groundwater flow direction. The targeted gauging round was completed on 15 October 2025 at the following locations: shallow wells: MW106S, MW122, MW123, MW124, MW125S, MW126S, MW146S, MW162S, MW188S, MW232S, MW247S, MW256S, MW257S, MW260S, MW268S and MW897S deep monitoring wells: MW106D, MW125D, MW126D, MW146AD, MW162D, MW188D, MW232D, MW247D, MW256D, MW257D, MW260D, MW268D and MW897D. Measurements of depth to groundwater were undertaken using a decontaminated interface probe, which was serviced by the supplier prior to use. The equipment supplier records are provided in Appendix C.
Field parameters	Temperature, electrical conductivity, dissolved oxygen, oxidation-reduction potential (ORP), pH and observations of water quality were recorded for groundwater and surface water samples. Water quality parameters were collected using a calibrated water quality meter. The equipment supplier service and calibration records, and field calibration records are provided in Appendix C.
Sampling methodology	Groundwater Monitoring Wells Groundwater samples were collected from monitoring wells using a no-purge methodology with HydraSleeves™ which were installed within the screened interval of the wells and avoiding placing the bottom of the HydraSleeves™ at the base of the monitoring well, where a build-up of sediment may be present. The installation depth of the HydraSleeves™ was recorded (as HydraSleeve™ collar depth in metres below top of casing [mbTOC]). HydraSleeves™, with bottom weights only, were installed / deployed in monitoring wells for a minimum of 4 hours prior to sampling, to allow the aquifer to equilibrate before the samples were collected. For this event, the HydraSleeves™ were installed ahead of / during the bi-annual sampling event. Following sampling, water quality parameters were recorded ex-situ, from excess water present in the HydraSleeve™. As per the SAQP (AECOM, 2025), the groundwater sample from MW829 was collected using a dedicated disposable HDPE bailer, as this pump station bore/sampling point is a non-traditional well with no well cap or gatic. Residential Bores

Item	Details
	Bore water samples were collected by placing the new laboratory provided sample bottles beneath the tap outlet and the tap slowly opened to collect the “first flush” of water, with the caps immediately installed once the containers were full. Following sampling, water quality parameters were recorded ex-situ, by placing the water quality meter probe in a cup filled with bore water from the tap outlet. Surface Water Surface water samples were collected from either mid-way through the water column or approximately 0.5 m below the surface (if possible) using a ‘grab’ sample method, without disturbing the bottom of the surface water body and without capturing any surface film, to minimise collection of sediment, or floating materials in the samples. At each location, new laboratory supplied containers were lowered into the water with the caps immediately applied once the containers were full. Where sampling points were not able to be accessed safely, surface water samples were collected with use of a sampling pole. Description of each sampling location were recorded (including physical setting, flow observations, presence of sheen or foam etc). Sediment Sediment samples were collected from a depth representative of potentially deposited sediments and collected from within the water body, using a hand trowel to a maximum depth of 0.3 m below the sediment surface. A new laboratory supplied container was used at each location for collection of samples, and any reusable sampling equipment (i.e. trowel) utilised was de-contaminated between locations. Description of each sampling location and the sample material was recorded.
QA/QC Samples	A Quality Assurance and Quality Control (QA/QC) program was implemented for the sampling and analysis program in order to obtain representative data and assess the reliability of the data obtained. To facilitate the QA/QC program the following sample types were obtained during the sampling program: • <i>Intra-laboratory duplicates</i> collected at a rate of 1 in 10 primary samples for water matrices and 1 in 20 for sediment matrices. The relative percentage difference (RPD) should be less than 30%, or less than 50% if results are less than 20 times the LOR. Higher RPDs may also be acceptable if results are less than 10 times the LOR. • <i>Inter-laboratory duplicates</i> collected at a rate of 1 in 10 primary samples for water matrices and 1 in 20 for sediment matrices. The RPD should be less than 30%, or less than 50% if results are less than 20 times the LOR. Higher RPDs may also be acceptable if results are less than 10 times the LOR. • <i>Rinsate blanks</i> collected at a frequency of one per set of sampling equipment per day where equipment was reused between locations. Analytical results should be below the laboratory LOR. The QA/QC samples for the bi-annual sampling event included: • 12 x intra-laboratory duplicates comprising 10 water (7 groundwater, 3 surface water) and 2 sediment, which met the target frequency • 13 x inter-laboratory duplicates, comprising 11 water (8 groundwater, 3 surface water) and 2 sediment, which met the target frequency

Item	Details
	8 x rinsate blanks, which met the target frequency. The total number of primary samples collected amounts to 120 samples, comprising 95 samples for water (71 groundwater, 24 surface water) and 25 samples for sediment. The data validation assessment is presented in Appendix D.
Sample analysis	Samples were submitted for PFAS full suite analysis using standard level of detection (i.e. standard LOR), with the exception of select groundwater monitoring locations submitted for low level of detection (i.e. low level LOR) (refer to Table 1 in Section 2.0 for specific locations). ALS Environmental (ALS) Sydney, NSW was used as the primary laboratory. Envirolab Services (Envirolab) Sydney, NSW was used as the secondary laboratory. ALS and Envirolab methods for analyses were certified by the National Association of Testing Authorities (NATA). A summary of the laboratory results is presented in Section 5.3 and the laboratory certificates are presented in Appendix E.

4.2 Adopted Screening Criteria

Guidance documents used to assess the dataset include the following:

- PFAS National Environmental Management Plan (NEMP) Version 3.0, Heads of EPA (HEPA) Australia and New Zealand. March 2025 (HEPA, 2025)
- Department of Health (DoH), 2017. *Health Based Guidance Values for PFAS for use in site investigations in Australia*. April 2017.
- National Health and Medical Research Council (NHMRC), 2019. *Guidance on PFAS in Recreational Water*. August 2019.
- NHMRC, 2025. *Australian Drinking Water Guidelines 6, 2011 - National Water Quality Management Strategy*. Version 4.0 Updated June 2025.

The adopted PFAS screening criteria to assess the data generated as part of the OMP are presented in **Table 6** below. It is noted that at the time of preparing this report, the PFAS NEMP 3.0 (HEPA, 2025) did not provide any screening criteria for PFAS in sediments.

Table 6 Summary of Adopted Screening Criteria: Water

Media	Pathway	Compound	Criteria	Comment/Reference
Human Health Receptors				
Water – Groundwater	Drinking water	PFOS	0.008 µg/L	The values are from the ADWG (NHMRC, 2025) which includes revised guidance criteria for PFOS, PFHxS, PFOA and PFBS, released in June 2025. <i>All groundwater results were compared to these criteria.</i>
		PFHxS	0.03 µg/L	
		PFOA	0.2 µg/L	
		PFBS	1 µg/L	
Water – Surface Water and Groundwater	Recreational use	PFOS + PFHxS	2 µg/L	The values are from the PFAS NEMP (HEPA, 2025) which are based on the NHMRC (2019) values. Note: given that groundwater at the base is extracted for irrigation purposes (post treatment), the recreational guidelines have been adopted to be protective of this water use activity. Note: groundwater at the base was also screened against the drinking water guidelines as specified above. <i>All surface water and groundwater results were compared to these criteria.</i>
		PFOA	10 µg/L	
Ecological Receptors				
Water – Groundwater and Surface Water	Freshwater	PFOS	0.00023 µg/L	The values are from the PFAS NEMP (HEPA, 2025) which endorsed the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZG, 2023). The 99% species protection level has been applied for high value conservation systems. This approach is generally adopted for chemicals that bioaccumulate and biomagnify in wildlife. It is proposed that the laboratory LOR is adopted for the purposes of preliminary screening of analytical water results, rather than sole use of the criteria value. <i>All groundwater and surface water results were compared to these criteria.</i>
		PFOA	19 µg/L	

4.3 Triggers Levels

The following trigger levels as presented in the OMP (Defence, 2023b) have also been assessed:

- First-time detection of PFAS in groundwater / surface water
- First-time exceedance of the drinking water guideline in groundwater
- First-time exceedance of the recreational water guideline in surface water

- First-time exceedance in groundwater of the groundwater exposure point concentration (EPC) used in the Human Health Risk Assessment (HHRA) (AECOM, 2017b) for the relevant Risk Zone¹:
 - o Risk Zone A – PFOS+PFHxS: 190.3 µg/L
 - o Risk Zone B – PFOS+PFHxS: 5.67 µg/L
 - o Risk Zone C & D – PFOS+PFHxS: 0.05 µg/L
- First-time exceedance in surface water of the surface water EPC for 95th percentile used in the 2017 HHRA (AECOM, 2017b):
 - o Marine Water - PFOS: 1.78 µg/L, PFHxS: 1.48 µg/L
 - o Region 1 – PFOS: 5.035 µg/L, PFHxS: 1.666 µg/L
 - o Region 2 – PFOS: 1.47 µg/L, PFHxS: 1.009 µg/L
 - o Region 3 – PFOS: 7.743 µg/L, PFHxS: 6.773 µg/L
- Sediment PFAS concentration increase in two consecutive sampling events

Note that PFAS trends will be reviewed and discussed in the next OMR, together with a review of the CSM and risk profile.

4.4 Data Quality Objectives and Data Validation

The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (AECOM, 2025). The data validation assessment is provided in **Appendix D**.

Data validation procedures employed in the assessment of the field and laboratory's Quality Assurance and Quality Control data, completed as per Section 3.2 of the SAQP, indicated that the reported analytical results are representative of the sample locations and that the overall quality of the analytical data produced is acceptably reliable (i.e. >95% of the data was suitable for use and DQIs passed acceptance criteria) for the purpose of this SER.

Further details are provided in the data validation assessment in **Appendix D**.

All data collected during this event have been reviewed and uploaded to the Defence ESdat database in accordance with Defence Contamination Management Manual requirements.

¹ Risk Zones and Regions as defined in the HHRA (AECOM, 2017b), detailed below. The extent of the Risk Zones and Regions are shown in the HHRA (AECOM, 2017b) maps displayed in **Appendix F** of this report.

- **Marine Water:** various water bodies such as those associated with Port Stephens and Hunter River (i.e. Fullerton Cove for the purpose of the OMP)
- **Region 1:** the area east of the base, generally following Moors Drain and discharging at the tidal portion of Tilligerry Creek.
- **Region 2:** the area along Tilligerry Creek south east of the base which discharges in the tidal portion of Tilligerry Creek
- **Region 3:** the surface water drainage network south of the base, which predominantly discharges at Fullerton Cove.
- **Risk Zone A** is defined by the footprint of the Southern Area, which includes a portion of Region 3.
- **Risk Zone B** is defined by the footprint of the Eastern Area, which includes a portion of both Region 1 and Region 3.
- **Risk Zone C** is defined by that portion of the footprint of the remaining area, which corresponds with Region 1 and Region 3.
- **Risk Zone D** is defined by that portion of the footprint of the remaining area, which corresponds with Region 2.

5.0 Field Observations and Results

5.1 General Observations

The weather conditions and general observations (including activities that may impact the monitoring program) recorded during the bi-annual sampling event are summarised below in **Table 7**.

The sampling event and related activities, such as the deployment of HydraSleeves™ and the gauging event, took place between 7 October 2025 and 20 October 2025.

Table 7 General Observations

Items	Observations
Weather Conditions	The following weather observations are for Williamtown (Williamtown RAAF, Station 061078) (Bureau of Meteorology, 2025). Maximum daily temperatures across the sampling event days ranged between 36.0°C (20 October 2025) and 22.2°C (18 October 2025). The monthly mean maximum temperature for October was 39.8 °C. Rainfall was recorded on 7, 10 and 18 October 2025. Across the sampling event days, a total of 10 mm of rainfall were recorded. The monthly totals for October 2025 was 30.8 mm.
Estate Management Works, Training Activities and/or Construction Works.	No estate management works, training activities or construction works, with the potential to impact the program, were observed during the sampling event.

5.2 Field Observations and Measurements

The observations and measurements recorded during the field activities are summarised in **Table 8**, below.

Table 8 Field Observations and Measurements

Item	Description
Monitoring Well Network Condition	The following observations of the well network were noted: - MW108D: well gatic lid unable to be closed due to the PVC and/or J-cap height. - MW177 and MW264S: Roots noted on the IP. Possible partial blockage of the well. - MW220S: Well lid damaged. This was replaced during the mobilisation. - MW266D: bolts rusted and rounded. Unable to repair the well on this mobilisation.
Water Observations	No visible signs of contamination were observed in the groundwater and surface water locations sampled. Organic and/or sulphurous odours were noted at 38 groundwater locations (refer to Table T2 in Appendix B). An organic odour was noted during sampling at surface water location SW600 (refer to Table T3 in Appendix B)

Item	Description
Depth to Groundwater and Flow Direction	During the sampling event, depth to groundwater ranged between 0.000 (MW144 and MW538) and 4.846 (MW177) mbTOC, and groundwater elevation ranged between -0.710 (MW829) and 9.353 (MW264S) metres Australian Height Datum (mAHD). Groundwater gauging data is presented in Table T1 in Appendix B. The inferred groundwater flow direction is to the south and southeast, towards Tilligerry Creek and Fourteen Foot Drain, and to the north and northeast, south of Tilligerry Creek, Fourteen Foot Drain and Ten Foot Drain (refer to Figure F5-1 and F5-2 in Appendix A), which was generally consistent with previous flow directions. Note that the groundwater elevation contours in Figure F5-1 and Figure F5-2 are based on gauging 29 selected wells on 15 October 2025, to minimise the potential for temporal variability.
Water Quality Parameters	Groundwater and surface water quality parameters were measured during the collection of water samples. The readings are presented in Table T2 and Table T3 in Appendix B and are summarised below: Groundwater Quality Parameters - Dissolved oxygen ranged between 0.16 mg/L (MW144) and 4.04 mg/L (MW168) indicating poor to medium oxygenated conditions. - Electrical conductivity ranged between 55.1 $\mu\text{S}/\text{cm}$ (MW166) and 42,300 $\mu\text{S}/\text{cm}$ (MW266S) indicating fresh to saline conditions. - pH ranged between 4.18 (MW282S) and 8.18 (MW144) indicating acidic to mildly alkaline conditions. - ORP (corrected) ranged between -76.3 mV (MW144) and 4394.8 mV (MW240D) indicating reducing to mildly oxidising conditions. - Temperature ranged between 13.2°C (MW329) and 25.1°C (POT382). Surface Water Quality Parameters - Dissolved oxygen ranged between 1.07 mg/L (SW588) and 8.61 mg/L (SW007) indicating moderately to well oxygenated conditions. - Electrical conductivity ranged between 91.4 $\mu\text{S}/\text{cm}$ (SW048) and 9,555 $\mu\text{S}/\text{cm}$ (SW024) indicating fresh to brackish conditions. - pH ranged between 5.34 (SW048) and 7.46 (SW006) indicating mildly acidic to near neutral conditions. - ORP (corrected) ranged between 86.4 mV (SW588) and 363.4 mV (SW110) indicating mildly reducing to mildly oxidising conditions. - Temperature ranged between 15.2°C (SW059) and 19.8°C (SW108).
Sediment Observations	Sediment sampled and logged during this sampling event comprised sand, silt and clay materials with organic material inclusions (roots) and, for some materials, traces of gravels or shell fragments. An organic odour was noted at SD600 and a sulphurous odour was noted at SD001. Refer to in Table T4 in Appendix B for a summary of sediment classifications and observations.

5.3 Summary of Analytical Results

5.3.1 Groundwater Analytical Results

The groundwater PFAS analytical results from this sampling event are presented in **Table T5** in **Appendix B**. In summary, 71 primary groundwater samples were analysed for PFAS during this sampling event, of these:

- 58 primary samples reported concentrations of PFAS with Australian guideline values (PFOA, PFOS, PFHxS, and PFBS) above the adopted laboratory LOR
- 45 primary samples exceeded the adopted human health drinking water screening criteria for PFOA, PFOS, PFHxS and/or PFBS
- 15 primary samples exceeded the adopted human health recreational water screening criteria for PFOA, PFOS, PFHxS, and/or PFHxS+PFOS
- 55 primary samples exceeded the adopted ecological screening criteria for PFOA and/or PFOS.

The groundwater sampling locations, their sampling status and applicable triggers are presented in **Figures F6-1 to 6-4** in **Appendix A**.

5.3.2 Surface Water Analytical Results

The surface water PFAS analytical results from this sampling event are presented in **Table T6** in **Appendix B**. In summary, 24 primary surface water samples were analysed for PFAS during this sampling event, of these:

- 23 primary samples reported concentrations of PFAS with Australian guideline values (PFOA and/or PFOS+PFHxS) above the adopted laboratory LOR
- 11 primary samples exceeded the adopted human health recreational water screening criteria for PFOA and/or PFOS+PFHxS
- 22 primary samples exceeded the adopted ecological screening criteria for PFOA and/or PFOS.

The surface water sampling locations, their sampling status and any applicable triggers are presented in **Figure F7** in **Appendix A**.

5.3.3 Sediment Analytical Results

The sediment PFAS analytical results from this sampling event are presented in **Table T7** in **Appendix B**. In summary, 25 primary sediment samples were analysed for PFAS during this sampling event. All 24 primary samples reported concentrations of PFAS above the adopted laboratory LOR.

The sediment sampling locations, their sampling status and any applicable triggers are presented in **Figure F8** in **Appendix A**.

5.3.4 Historical Analytical Results

The groundwater, surface water and sediment PFAS analytical results from this sampling event as well as historical data for all locations currently in the OMP scope, as per the SAQP (AECOM, 2025), are presented in **Table T8**, **Table T9** and **Table T10** (respectively) in **Appendix B**.

5.4 Trigger Levels Assessment

The assessment of analytical results from this sampling event against the OMP trigger levels and associated responses is presented in **Table 9**.

Table 9 Trigger Levels Assessment

Trigger Type	Analyte	Triggers in Bi-annual Sampling Event Data Location (Concentration)	Responses
First-time detection of PFAS (for PFAS with Australian guideline values), in groundwater and surface water. <i>Note: These triggers are highlighted in blue in the result figure, Figure F6 in Appendix A, and in the analytical table, Table T8 in Appendix B. Where the trigger is also a first-time exceedance of human health guidelines, these are highlighted in yellow.</i> <i>Additionally, the first-time detections of PFOS are also first-time exceedances of the adopted ecological guideline (HEPA, 2025) – while not an OMP trigger, these have also been highlighted in yellow along with first-time exceedances of adopted human health criteria.</i>	PFOS	POT382 (0.002 µg/L)	- POT382 was the only location that reported a first-time detection of PFAS during the current sampling round, which is attributed to the adoption of the low-level LOR for this sampling event. - Five other locations (MW266S, MW278D, MW144, MW270S and MW241S) reported first-time detections of individual PFAS compounds not previously reported at those locations, however as other PFAS had previously been detected in these locations, these are not considered to be a “first time detection of PFAS” - The first time detection of PFBS at MW144 correlates with the elevated concentrations of other PFAS (namely PFOS, PFHxS). The reason for this is unknown, however further monitoring will confirm whether these elevated concentrations are anomalous or an increasing concentration trend. - No changes to the monitoring frequency is considered to be warranted following a review of these exceedances for the OMP monitoring locations.
First-time exceedance of the drinking water guideline (revised in June 2025 by NHMRC) in groundwater. PFOA: 0.2 µg/L PFOS: 0.008 µg/L PFHxS: 0.03 µg/L PFBS: 1 µg/L <i>Note: These triggers are highlighted in yellow in the result figure, Figure F6 in</i>	PFOA	Nil	- There were no first time exceedances of the drinking water guidelines reported in the groundwater samples analysed during this event - PFHxS was reported at concentrations above the revised NHMRC (2025) criteria in MW144 and MW537, however as concentrations of PFOS had previously exceeded the revised drinking water criteria, these are not considered to be first time exceedances - It is noted that these two locations are ad hoc, selected for sampling during the April 2025 annual sampling event and had previously not been sampled since 2017, and therefore rolling averages were not calculated.
	PFOS	Nil	
	PFHxS	Nil	
	PFBS	Nil	

Trigger Type	Analyte	Triggers in Bi-annual Sampling Event Data Location (Concentration)	Responses
<i>Appendix A, and in the analytical table, Table T8 in Appendix B.</i>			No changes to the monitoring frequency are considered to be warranted upon review of these exceedances for the OMP monitoring locations.
First-time exceedance of the recreational water guideline (HEPA, 2025) in surface water:	PFOA	Nil	Nil
PFOA: 10 µg/L PFOS+PFHxS: 2 µg/L <i>Note: These triggers are highlighted in yellow in the result figure, Figure F7 in Appendix A, and in the analytical table, Table T9 in Appendix B.</i>	PFOS+PFHxS	SW048 (2.07 µg/L)	- The first-time exceedance at SW048 remains within the same order of magnitude as historical ranges, with the previous highest PFOS+PFHxS concentration reported was 1.78 µg/L in September 2024. - The rolling average over a three-year period (2023-2025) for PFOS+PFHxS is 1.14 µg/L (at SW048), which remains below the adopted recreational water guideline. - No changes to the monitoring frequency are considered to be warranted upon review of these exceedances for the OMP monitoring locations.
First-time exceedance in groundwater of the groundwater EPC used in the 2017 HHRA (AECOM, 2017b) for the relevant Risk Zone: Risk Zone A PFOS+PFHxS: 190.3 µg/L Risk Zone B PFOS+PFHxS: 5.67 µg/L Risk Zone C & D PFOS+PFHxS: 0.05 µg/L <i>Note: These triggers are highlighted in green in the result figure, Figure F6 in Appendix A, and in the analytical table, Table T8 in Appendix B.</i>	PFOS+PFHxS	- MW271D (0.054 µg/L) [Risk Zone C] - MW537 (0.074 µg/L) [Risk Zone C]	- The first-time exceedances at MW271D and MW537 were marginally above the EPC. - The rolling average over a three-year period (2023-2025) for PFOS+PFHxS result is 0.03 µg/L for MW271D, which remains below the EPC for Risk Zone C. No rolling average was calculated for MW537 given that this location is an ad hoc location added to sampling program during the April 2025 annual event, and prior to that was last sampled in 2017. - MW537 is on private property within the Secondary Management Zone. There is no change to the risk profile given that the NSW Governments precautionary advice continues to apply to this location. Additionally, the drinking water pathway is considered to be incomplete given that groundwater is not used at the property.

Trigger Type	Analyte	Triggers in Bi-annual Sampling Event Data Location (Concentration)	Responses
			No changes to the monitoring frequency are considered to be warranted upon review of these exceedances for the OMP monitoring locations.
First-time exceedance in surface water of the surface water EPC for 95th percentile used in the 2017 HHRA (AECOM, 2017b): Marine Water PFOS: 1.78 µg/L, PFHxS: 1.48 µg/L Region 1 PFOS: 5.035 µg/L, PFHxS: 1.666 µg/L Region 2 PFOS: 1.47 µg/L, PFHxS: 1.009 µg/L Region 3 PFOS: 7.743 µg/L, PFHxS: 6.773 µg/L <i>Note: These triggers are highlighted in green in the result figure, Figure F7 in Appendix A, and in the analytical table, Table T9 in Appendix B.</i>	PFOS	Nil	Nil
	PFHxS	SW006 (7.36 µg/L) [Region 1]	- The concentration of PFHxS in SW006 is within the same order of magnitude of historical ranges. - The rolling average over a three-year period (2023-2025) for PFHxS result (1.81 µg/L) for SW006 is above the EPC. - Note that the exceedance of the EPC for the three-year rolling average is due to the elevated concentration of PFHxS reported during the October 2025 sample event. The potential for PFHxS concentrations remaining elevated and temporal trends will be further assessed during the next event. - It is noted that at the time this sample was collected, no flow was observed (stagnant) and the water level was low (approximately 10 cm deep). Therefore, these concentrations may not be representative of base flow conditions. - No changes to the monitoring frequency are considered to be warranted upon review of these exceedances for the OMP monitoring locations.
Sediment PFAS (i.e. Sum of PFAS) concentration increase in two consecutive sampling events. <i>Note: These triggers are highlighted in yellow in the result figure, Figure F8 in</i>	Sum of PFAS	SD254 (0.0475 mg/kg)	- Although there was an increase in two consecutive sampling events, the total PFAS concentration of 0.0475 mg/kg at SD254 remains below the historical maximum concentration of 0.0494 mg/kg reported in 2021. - The potential for the sum of PFAS concentrations to continue to increase and the temporal trends will be further assessed for this location during the next event.

Trigger Type	Analyte	Triggers in Bi-annual Sampling Event Data Location (Concentration)	Responses
Appendix A , and in the analytical table, Table T10 in Appendix B .			No changes to the monitoring frequency are considered to be warranted upon review of these exceedances for the OMP monitoring locations.

6.0 Upcoming Sampling Event and Reporting

6.1 Upcoming Sampling Events

The next OMP sampling event is scheduled for Q2 2026.

6.2 Upcoming Ongoing Monitoring Report

The next OMR is scheduled to be delivered in Q1 of 2026, covering data collected within the 12-month sampling period between January 2025 and December 2025.

7.0 References

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Appendix A

Figures

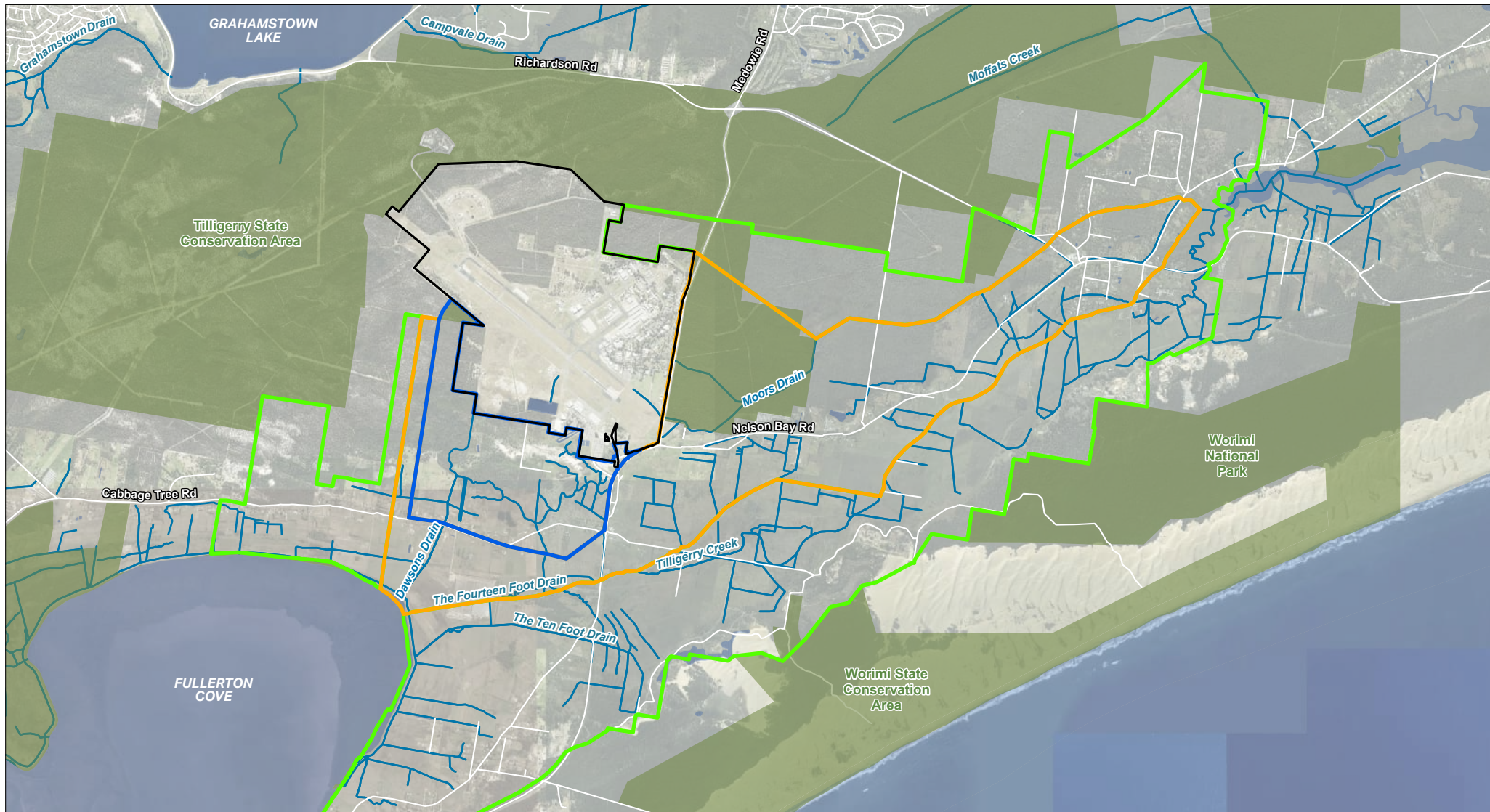


FIGURE F1: SITE LAYOUT

Legend

- | | |
|---------------------------|--------------|
| Active Base Boundary | NPWS Reserve |
| Primary Management Zone | Waterway |
| Secondary Management Zone | |
| Broader Management Zone | |



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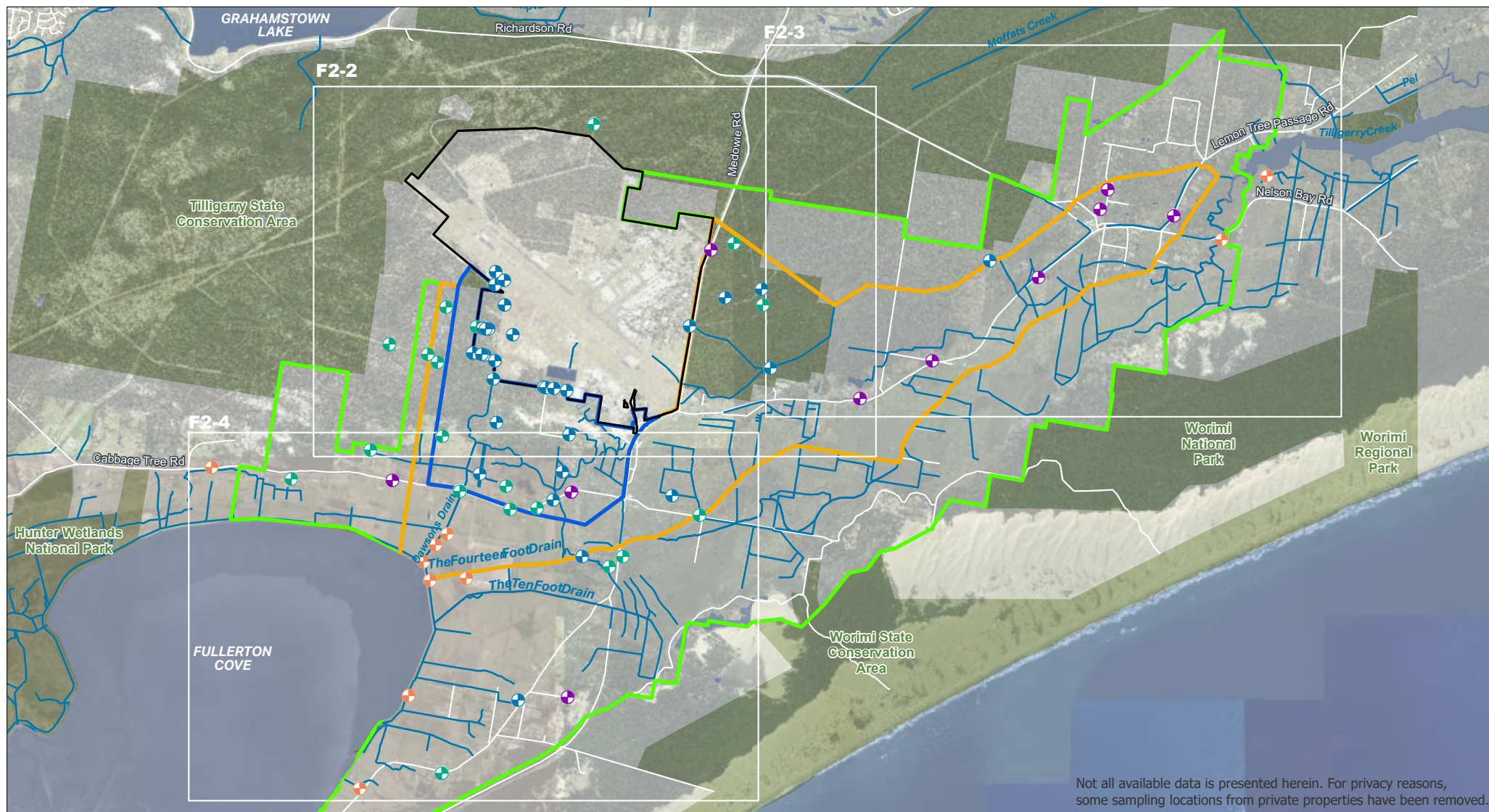


FIGURE F2-1: GROUNDWATER MONITORING LOCATIONS - OVERVIEW

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- NPWS Reserve
- Waterway
- + Groundwater Sampling Location - OMP - AdHoc
- + Groundwater Sampling Location - OMP - Low Level LOR Analysis
- + Groundwater Sampling Location - OMP - Standard Level LOR Analysis
- + Groundwater Sampling Location - OMP - Gauge Only



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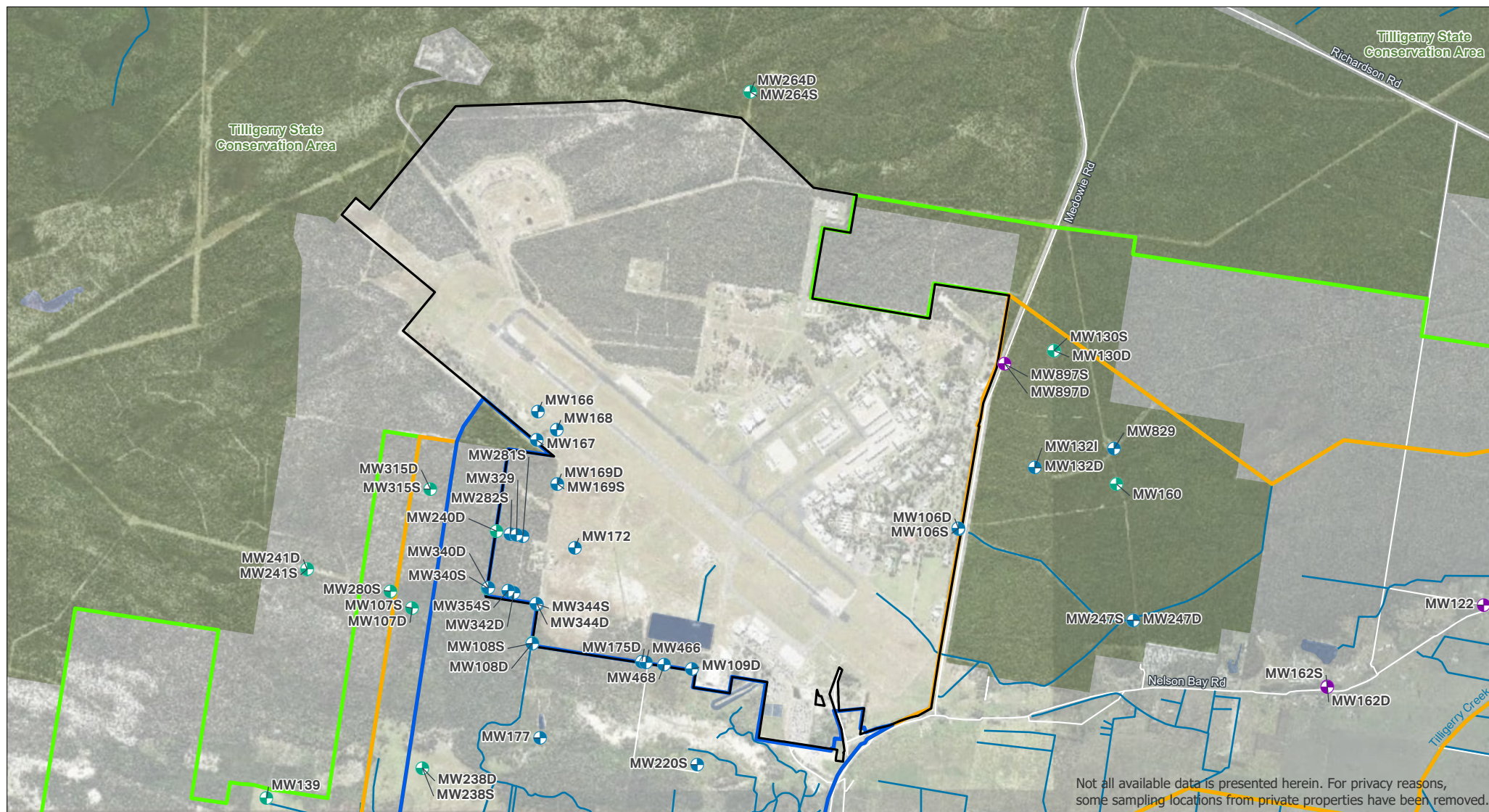


FIGURE F2-2: GROUNDWATER MONITORING LOCATIONS - BASE AND WEST

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- + Groundwater Sampling Location - OMP - AdHoc
- + Groundwater Sampling Location - OMP - Low Level LOR Analysis
- + Groundwater Sampling Location - OMP - Standard Level LOR Analysis
- + Groundwater Sampling Location - OMP - Gauge Only



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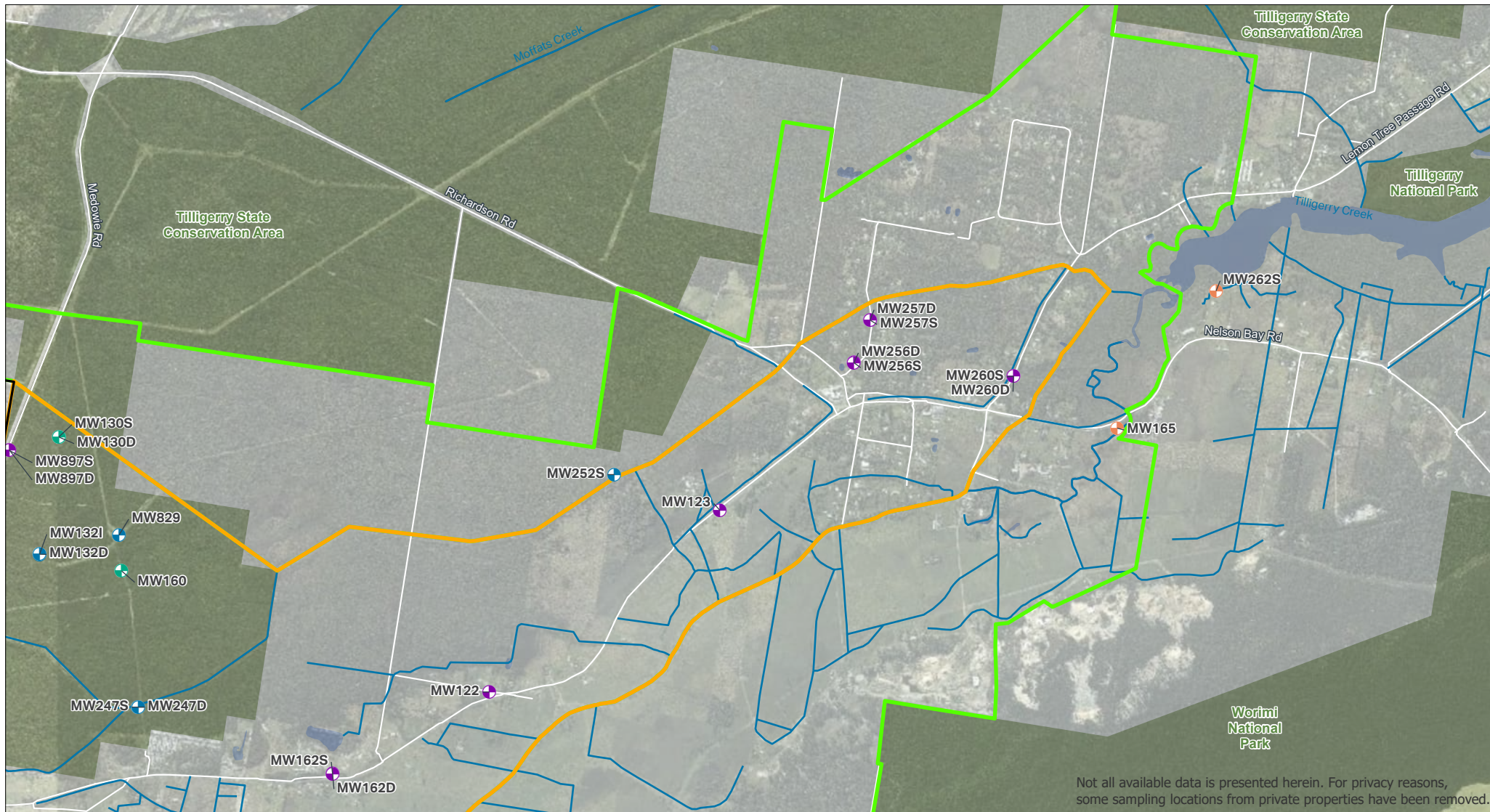


FIGURE F2-3: GROUNDWATER MONITORING LOCATIONS - EAST

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- + Groundwater Sampling Location - OMP - AdHoc
- + Groundwater Sampling Location - OMP - Low Level LOR Analysis
- + Groundwater Sampling Location - OMP - Standard Level LOR Analysis
- + Groundwater Sampling Location - OMP - Gauge Only



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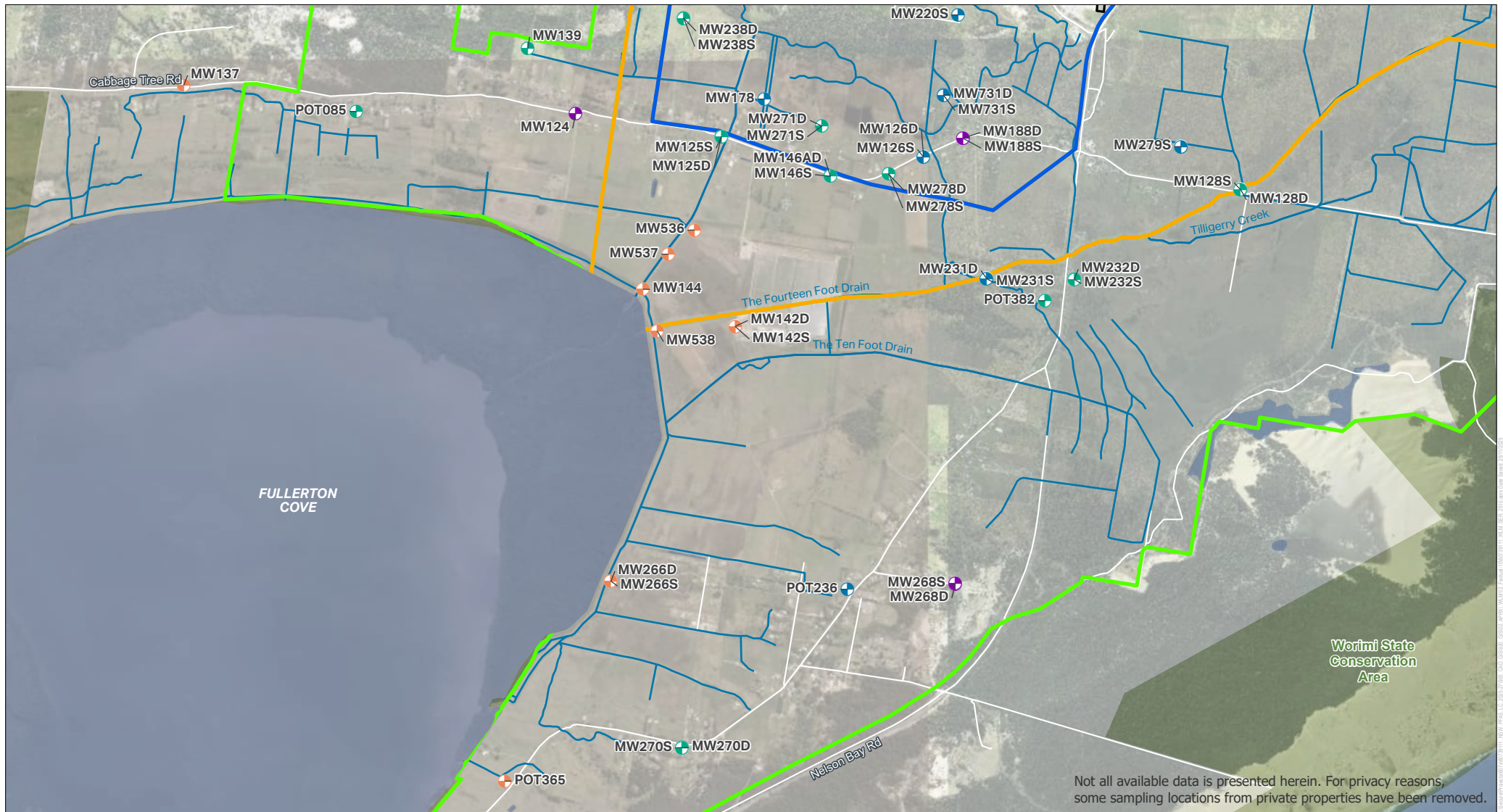


FIGURE F2-4: GROUNDWATER MONITORING LOCATIONS - SOUTH

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- NPWS Reserve
- Waterway
- Groundwater Sampling Location - OMP - AdHoc
- Groundwater Sampling Location - OMP - Low Level LOR Analysis
- Groundwater Sampling Location - OMP - Standard Level LOR Analysis
- Groundwater Sampling Location - OMP - Gauge Only



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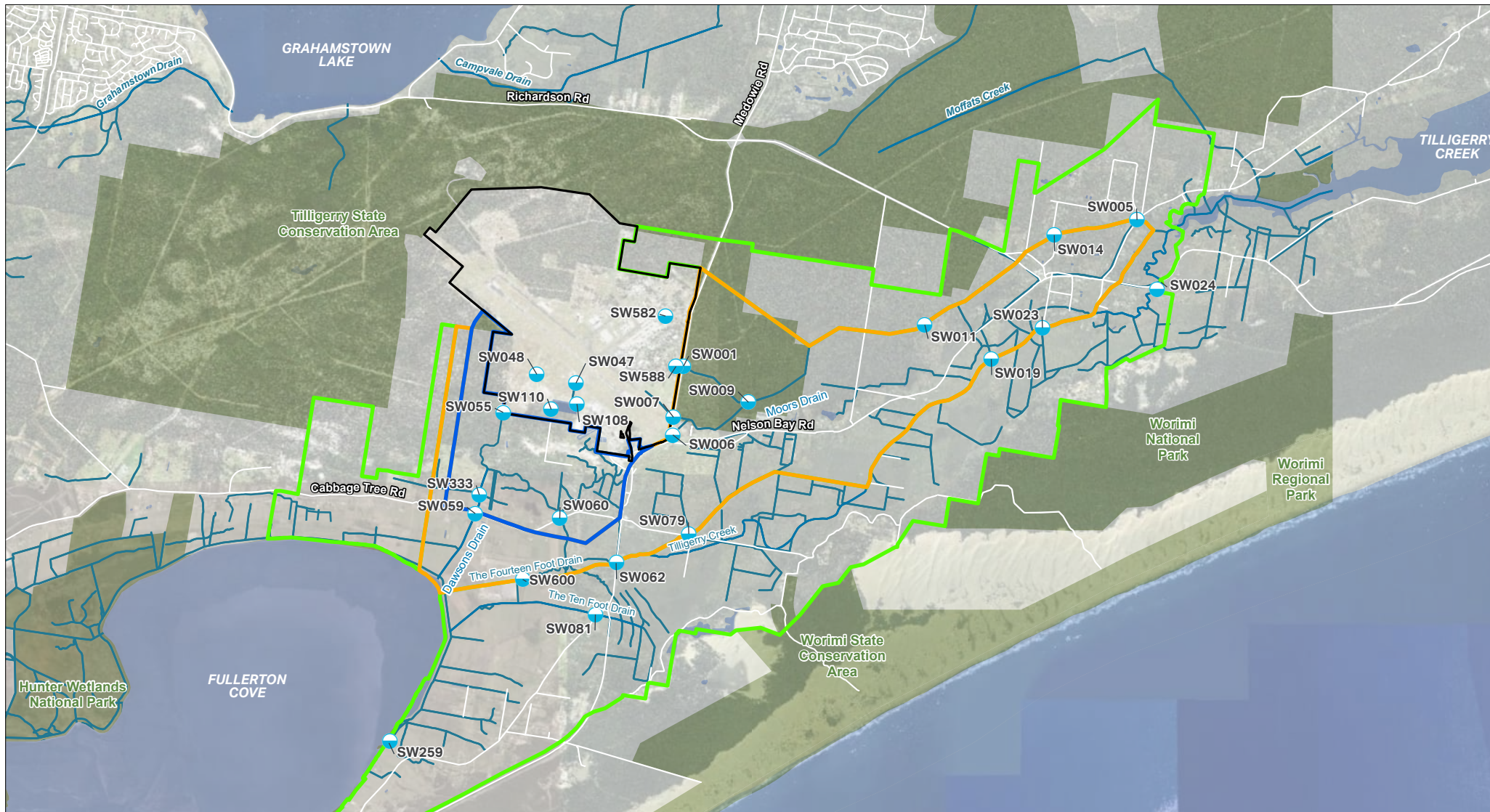


FIGURE F3: SURFACE WATER SAMPLING LOCATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- Waterway
- NPWS Reserve
- Surface Water Sampling Location



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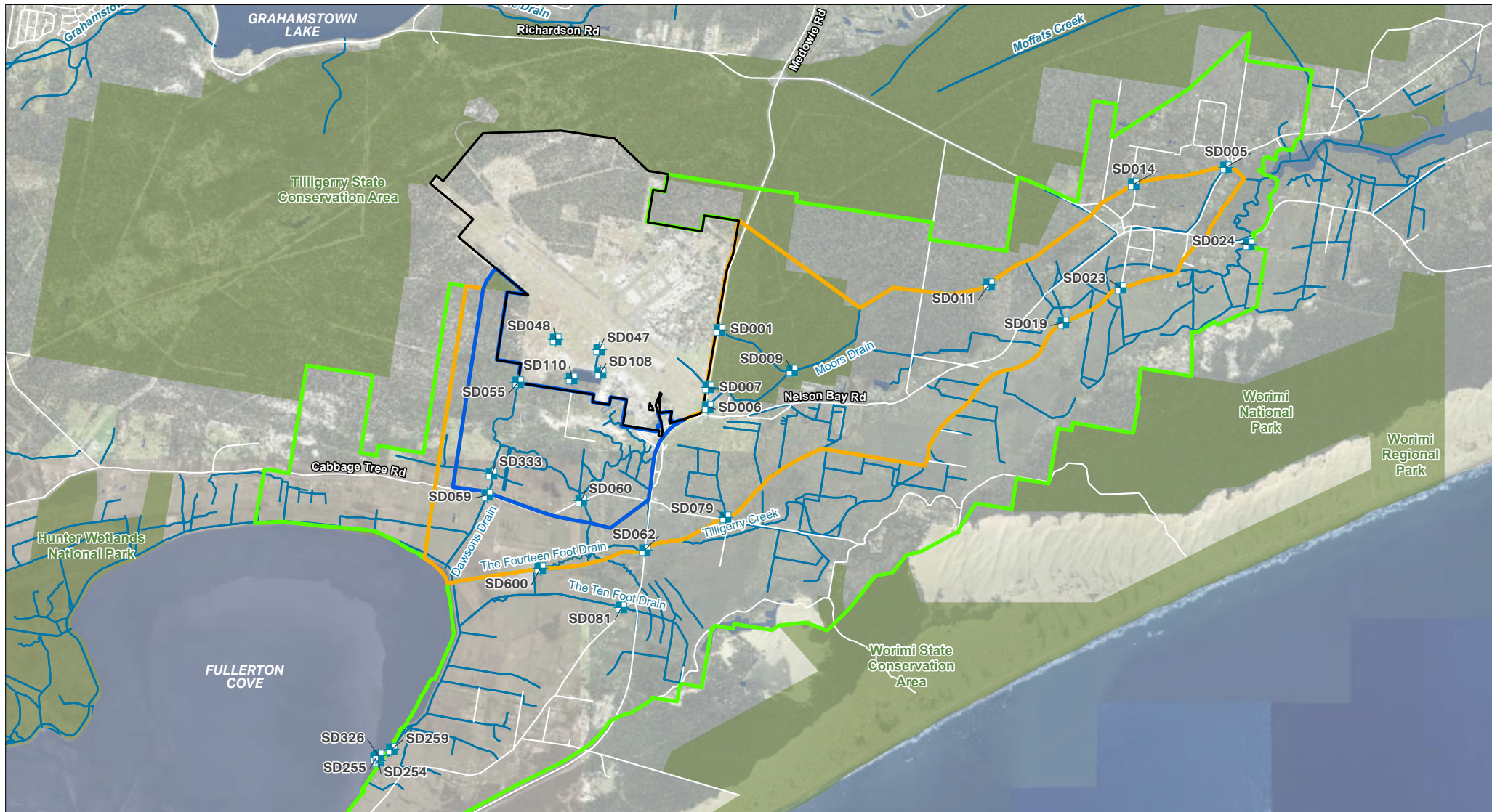


FIGURE F4: SEDIMENT SAMPLING LOCATIONS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- Sediment Sampling Location



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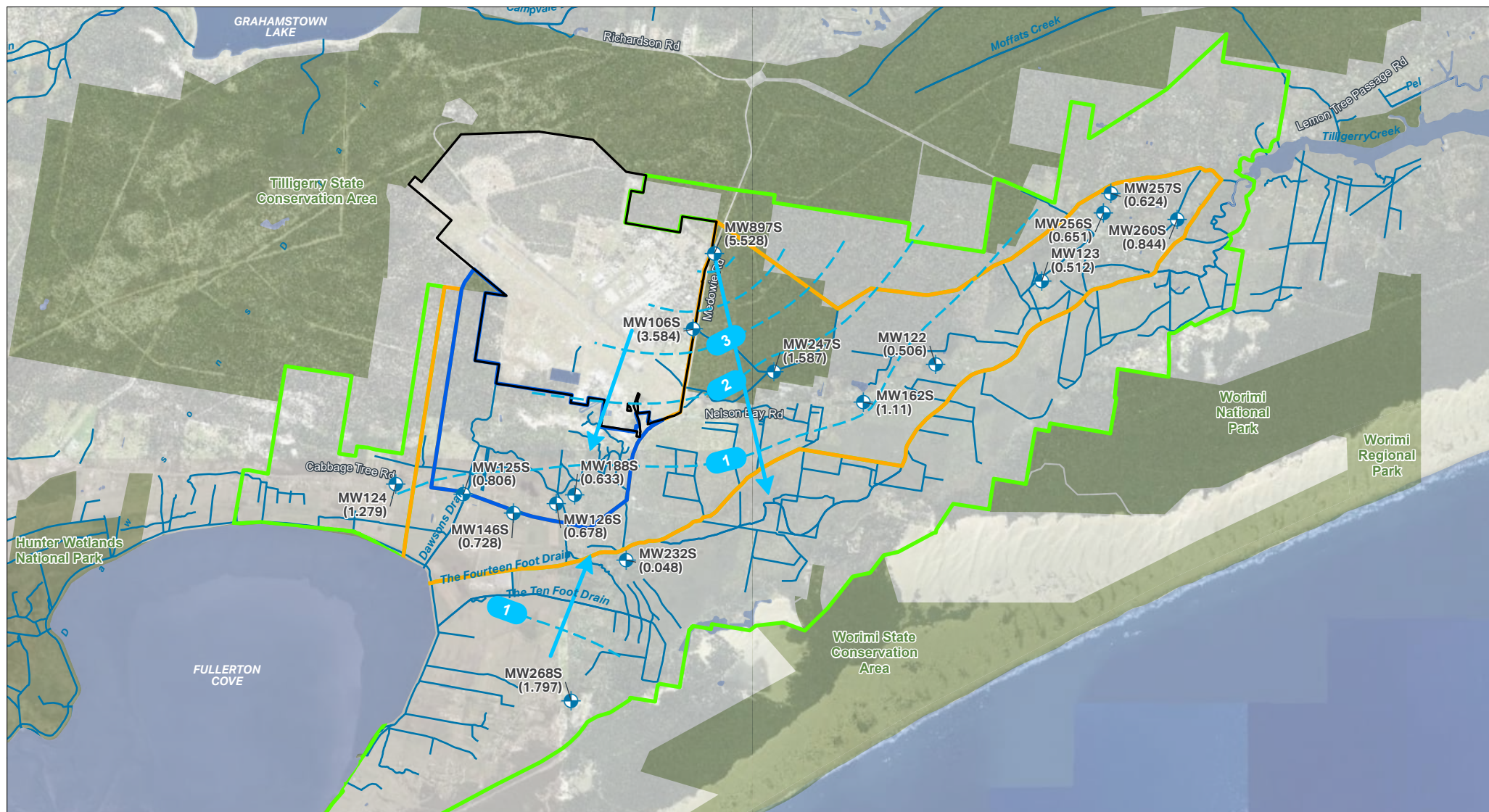


FIGURE F5-1: GROUNDWATER ELEVATION PLAN - SHALLOW

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway
- ➔ Inferred Groundwater Flow Direction
- Groundwater Elevation Contours (Shallow Wells; m AHD)
- ⬮ Groundwater Location (gauged)



0 1 2 km

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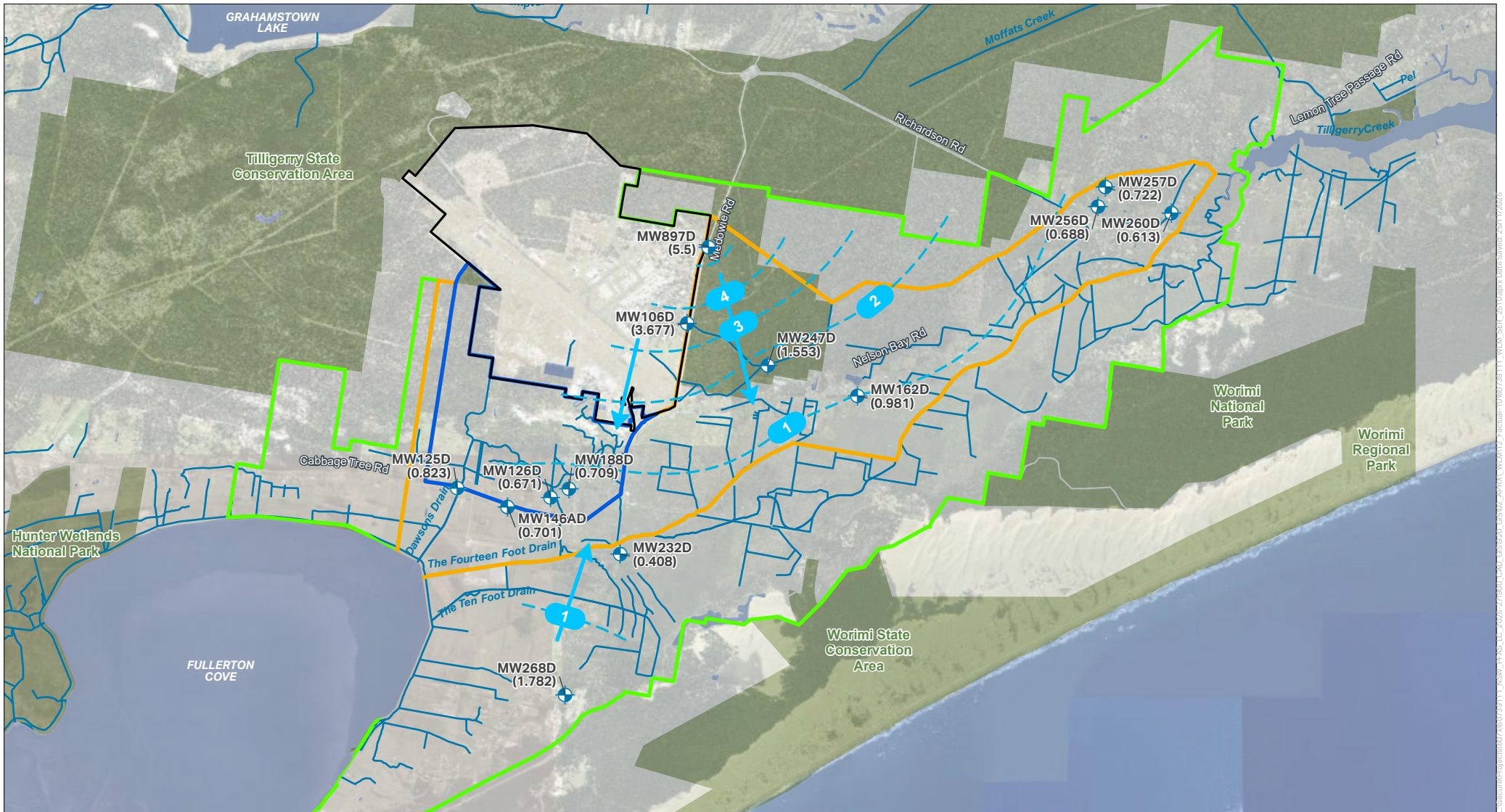


FIGURE F5-2: GROUNDWATER ELEVATION PLAN - DEEP

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- NPWS Reserve
- Waterway
- ➔ Inferred Groundwater Flow Direction
- Groundwater Elevation Contours (Deep Wells; m AHD)
- Groundwater Location (gauged)



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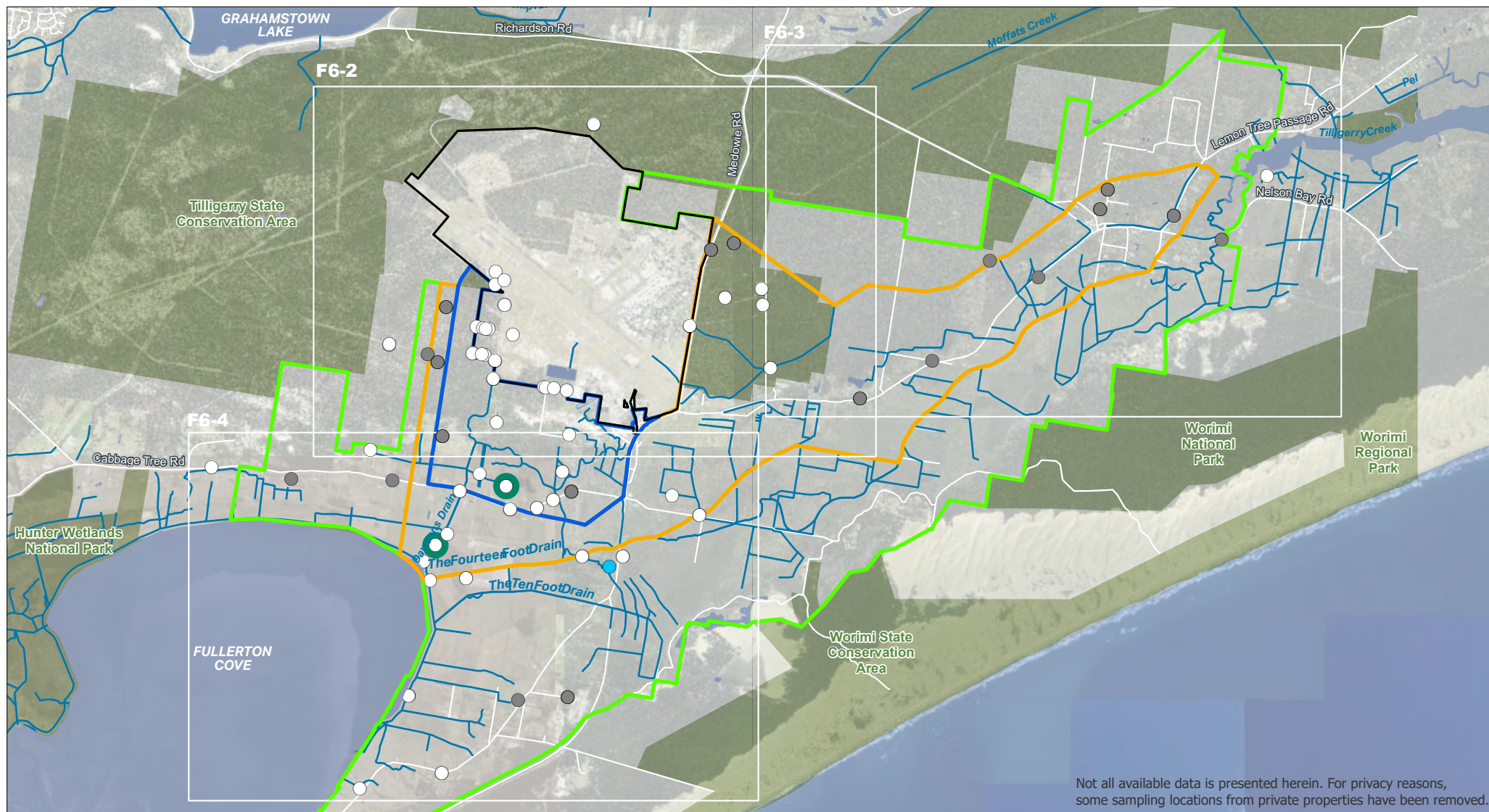


FIGURE F6-1: GROUNDWATER ANALYTICAL RESULTS - OVERVIEW

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- NPWS Reserve
- Waterway

- Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and /or PFBS
- Sampled, trigger met for first-time exceedance of drinking water criteria for PFOA, PFOS, PFHxS and/or PFBS
- Sampled, no trigger met

- Sampled, trigger met for first-time exceedance of groundwater EPC
- Not sampled



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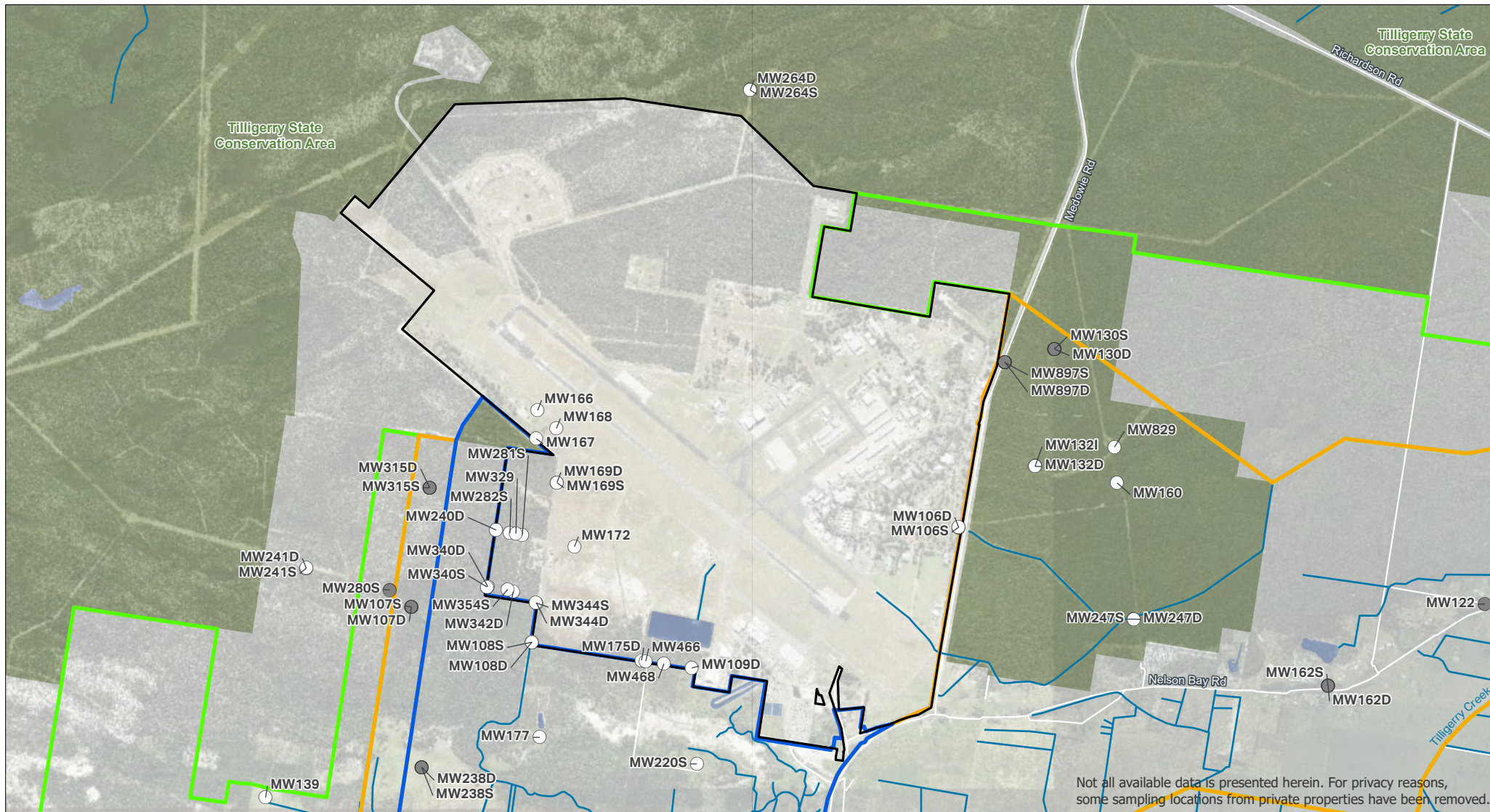


FIGURE F6-2: GROUNDWATER ANALYTICAL RESULTS - BASE AND WEST

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway

- Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and /or PFBS
- Sampled, trigger met for first-time exceedance of drinking water criteria for PFOA, PFOS, PFHxS and/or PFBS
- Sampled, no trigger met

- Sampled, trigger met for first-time exceedance of groundwater EPC
- Not sampled



0 0.5 1 km

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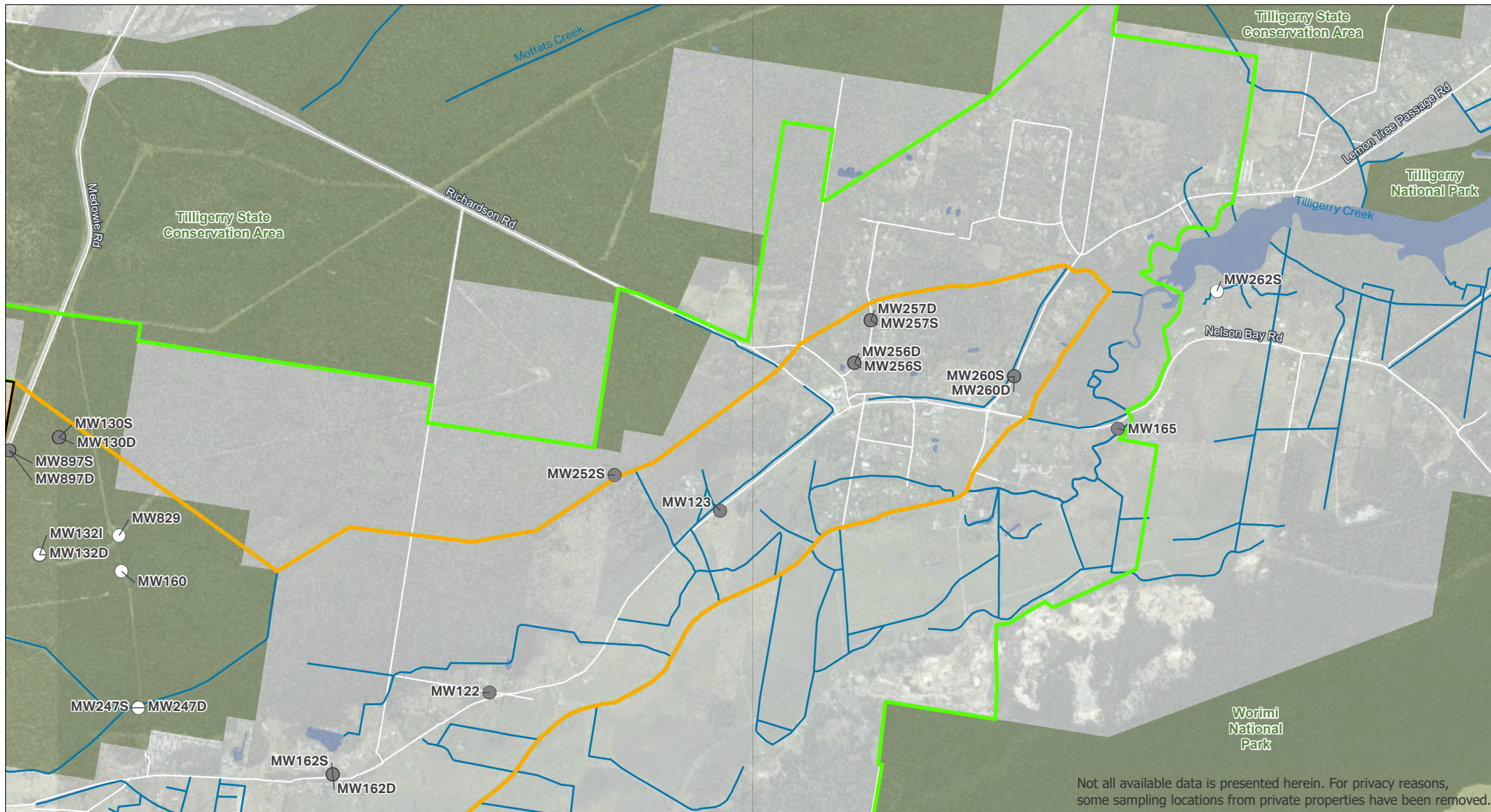


FIGURE F6-3: GROUNDWATER ANALYTICAL RESULTS - EAST

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway

- Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and /or PFBS
- Sampled, trigger met for first-time exceedance of drinking water criteria for PFOA, PFOS, PFHxS and/or PFBS
- Sampled, no trigger met

- Sampled, trigger met for first-time exceedance of groundwater EPC
- Not sampled



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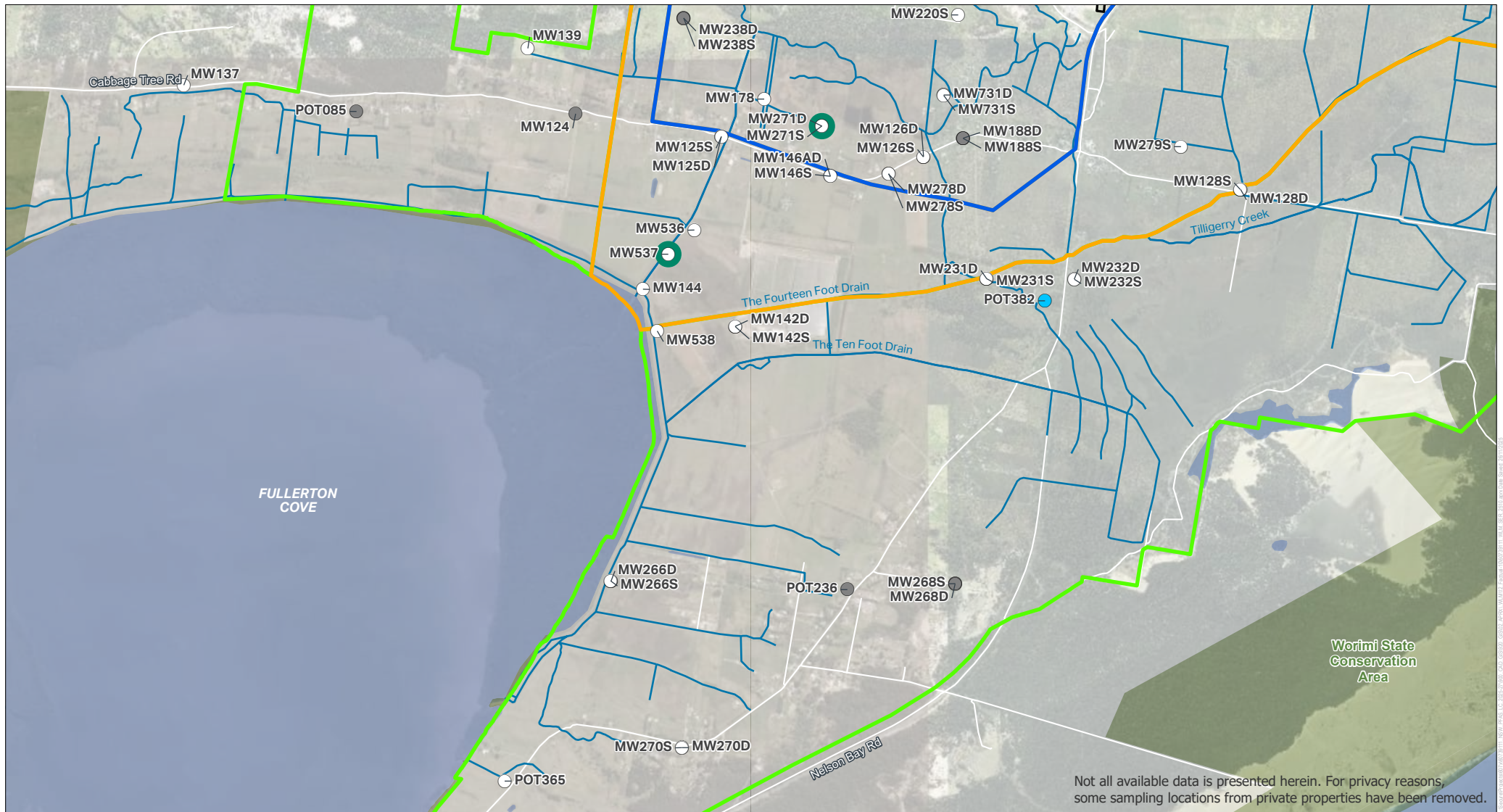


FIGURE F6-4: GROUNDWATER ANALYTICAL RESULTS - SOUTH

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- NPWS Reserve
- Waterway

- Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and /or PFBS
- Sampled, trigger met for first-time exceedance of drinking water criteria for PFOA, PFOS, PFHxS and/or PFBS
- Sampled, trigger met for first-time exceedance of groundwater EPC
- Not sampled
- Sampled, no trigger met



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FIGURE F7: SURFACE WATER ANALYTICAL RESULTS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Management Zone
- Waterway
- NPWS Reserve

- Sampled, trigger met for first-time detection of PFOA, PFOS, PFHxS, PFOS+PFHxS and/or PFBS
- Sampled, trigger met for first-time exceedance of human health screening criteria for PFOA and/or PFOS + PFHxS
- Sampled, no trigger met

- Sampled, trigger met for first-time exceedance of surface water EPC for 95th percentile
- Not sampled



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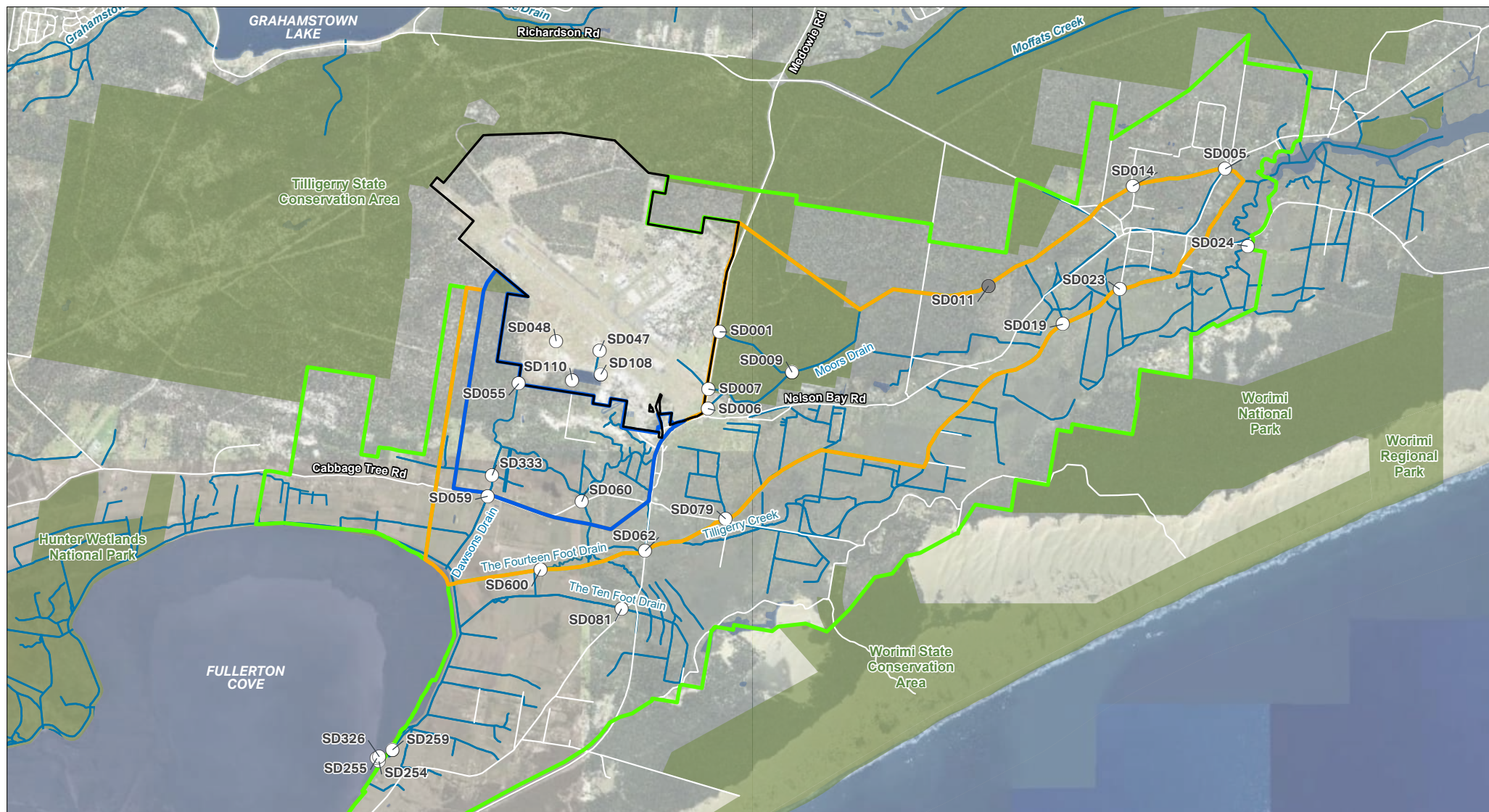


FIGURE F8: SEDIMENT ANALYTICAL RESULTS

Legend

- Active Base Boundary
- Primary Management Zone
- Secondary Management Zone
- Broader Mangement Zone
- NPWS Reserve
- Waterway
- Sampled, trigger met for PFAS concentration increase in two consecutive sampling events
- Sampled, no trigger met
- Not sampled



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Appendix B

Tables

Table T1 - Groundwater Gauging and Observations

Location Code	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW106D	4.770	18.5	20	0.0	18.5	15/10/2025 12:21	1.093	3.677	-	Gauging visit
MW106D	4.770	18.5	20	0.0	18.5	8/10/2025 15:35	1.045	3.725	19.540	Sampling visit
MW106S	4.678	3.5	5	0.0	2.9	15/10/2025 12:22	1.094	3.584	-	Gauging visit
MW106S	4.678	3.5	5	0.0	2.9	8/10/2025 15:29	1.045	3.633	4.470	Sampling visit
MW107D	3.362	18.5	20	0.0	18.9	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW107S	3.322	2.0	5	0.0	3.7	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW108D	3.080	18.5	20	0.0	18.0	10/10/2025 9:41	0.320	2.760	19.560	Sampling visit
MW108D	3.080	18.5	20	0.0	18.0	9/10/2025 11:00	0.335	2.745	19.570	HydraSleeve install visit. Well operational however lid no secured. HydraSleeve installed.
MW108S	2.950	2.0	5	0.0	3.3	9/10/2025 11:04	0.280	2.670	4.370	Sampling visit
MW109D	3.157	18.5	20	0.0	17.8	9/10/2025 12:00	0.140	3.017	18.980	Sampling visit
MW122	1.851	5.5	7	0.8	5.9	15/10/2025 8:47	1.345	0.506	-	Gauging visit
MW123	1.524	4.5	6	0.8	4.9	15/10/2025 9:43	1.012	0.512	-	Gauging visit
MW124	2.420	6.0	7.5	0.8	n/a	15/10/2025 14:02	1.141	1.279	7.380	Gauge only
MW125D	2.173	18.5	20	0.0	19.2	15/10/2025 13:57	1.350	0.823	-	Gauging visit
MW125D	2.173	18.5	20	0.0	19.2	13/10/2025 11:25	1.322	0.851	20.223	Sampling visit
MW125D	2.173	18.5	20	0.0	19.2	10/10/2025 11:27	1.263	0.910	20.230	HydraSleeve install visit. New Hydrasleeve installed.
MW125S	2.197	6.0	7.5	0.0	6.4	15/10/2025 13:56	1.391	0.806	-	Gauging visit
MW125S	2.197	6.0	7.5	0.0	6.4	10/10/2025 11:22	1.310	0.887	7.460	Sampling visit
MW126D	1.794	18.5	20	0.0	19.3	15/10/2025 12:45	1.123	0.671	-	Gauging visit
MW126D	1.794	18.5	20	0.0	19.3	9/10/2025 14:31	1.047	0.747	20.320	Sampling visit
MW126S	1.790	5.5	7	0.0	5.6	15/10/2025 12:45	1.112	0.678	-	Gauging visit
MW126S	1.790	5.5	7	0.0	5.6	9/10/2025 14:29	1.035	0.755	6.590	Sampling visit
MW128D	0.843	9.3	10.3	0.0	9.4	8/10/2025 14:52	0.185	0.658	10.450	Sampling visit
MW128S	0.909	4.7	6.2	0.0	5.1	8/10/2025 14:45	1.040	-0.131	6.160	Sampling visit
MW130D	5.858	15.0	16.5	0.0	15.5	7/10/2025 12:02	n/a	n/a	n/a	Unable to access due to well being under flood water
MW130S	5.794	1.0	4	0.0	2.8	7/10/2025 12:02	n/a	n/a	n/a	Unable to access due to well being under flood water
MW132D	6.138	15.0	16.5	0.0	15.1	8/10/2025 9:47	1.890	4.248	16.100	Sampling visit
MW132I	6.164	8.4	9.9	0.0	8.7	8/10/2025 9:57	1.885	4.279	9.780	Sampling visit
MW137	2.820	0.5	3.5	0.0	2.4	10/10/2025 11:41	0.864	1.956	3.330	Sampling visit
MW139	1.986	1.0	4	0.0	2.9	9/10/2025 15:00	0.359	1.627	3.920	Sampling visit
MW142D	1.230	18.5	20	0.0	18.5	13/10/2025 12:42	0.796	0.434	21.997	Sampling visit
MW142S	1.230	0.8	3.8	0.0	1.5	13/10/2025 12:37	1.352	-0.122	4.688	Sampling visit
MW144	1.923	1.0	4	0.0	1.5	13/10/2025 13:33	-	n/a	4.931	Sampling visit. Well operational, however J-cap was loose. The HydraSleeve was blocking depth to water.
MW146AD	1.620	18.5	20	0.0	19.0	15/10/2025 12:53	0.919	0.701	-	Gauging visit
MW146AD	1.620	18.5	20	0.0	19.0	10/10/2025 12:12	0.820	0.800	20.070	Sampling visit
MW146S	1.802	0.8	3.8	0.0	2.7	15/10/2025 12:51	1.074	0.728	-	Gauging visit
MW146S	1.802	0.8	3.8	0.0	2.7	10/10/2025 12:10	0.990	0.812	3.790	Sampling visit
MW160	4.212	1.0	4	0.0	3.1	8/10/2025 9:29	0.709	3.503	4.010	Sampling visit
MW162D	2.876	18.6	20.1	0.0	19.0	15/10/2025 8:37	1.895	0.981	-	Gauging visit
MW162S	2.838	1.5	4.5	0.0	3.2	15/10/2025 8:37	1.728	1.110	-	Gauging visit
MW165	1.408	2.5	5	0.0	n/a	8/10/2025 11:15	n/a	n/a	n/a	Unable to locate. Lost/destroyed
MW166	7.100	0.8	3.8	0.0	2.6	10/10/2025 8:41	0.805	6.295	3.640	Sampling visit
MW167	7.190	0.7	3.7	0.6	3.3	10/10/2025 8:55	1.682	5.508	4.310	Sampling visit
MW168	6.780	0.7	3.7	0.0	2.4	10/10/2025 9:08	0.898	5.882	3.440	Sampling visit
MW169D	5.800	18.0	19.5	0.0	18.2	10/10/2025 9:28	0.630	5.170	19.280	Sampling visit
MW169S	5.830	0.7	3.7	0.0	2.7	10/10/2025 9:23	0.650	5.180	3.710	Sampling visit
MW172	4.880	0.7	3.7	0.0	2.3	9/10/2025 10:37	0.605	4.275	3.330	Sampling visit
MW175D	4.110	19.5	21	0.6	20.5	9/10/2025 11:21	1.035	3.075	21.500	Sampling visit. Good condition. Data logger removed 11:21am. Replaced at 11:25am.
MW177	6.458	2.6	5.6	0.0	4.8	20/10/2025 14:40	4.845	1.613	5.175	Sampling visit. Poor condition
MW177	6.458	2.6	5.6	0.0	4.8	20/10/2025 10:59	4.846	1.612	5.180	HydraSleeve install visit. Poor condition. Root intrusion causing blockage at 4.98m. Unable to clear, further maintenance required.
MW178	1.760	1.2	4.2	0.0	3.2	8/10/2025 11:24	0.365	1.395	5.970	Sampling visit
MW185S	2.971	1.0	4	0.0	n/a	20/10/2025 10:30	n/a	n/a	n/a	Unable to locate - well destroyed or lost under stockpile on site
MW188D	1.354	18.5	20	0.0	18.9	15/10/2025 10:47	0.645	0.709	-	Gauging visit
MW188S	1.439	0.8	3.8	0.0	2.8	15/10/2025 10:48	0.806	0.633	-	Gauging visit
MW220S	2.328	1.0	4	0.0	2.0	20/10/2025 14:14	0.683	1.645	3.990	HydraSleeve install visit. Well operational however well lid was smashed
MW220S	2.328	1.0	4	0.0	2.0	20/10/2025 10:18	0.683	1.645	3.990	HydraSleeve install visit. Well operational however well lid was smashed
MW230S	0.939	2.5	4	0.0	3.0	15/10/2025 11:21	0.473	0.466	4.009	Sampling visit
MW231D	0.571	16.0	17.5	0.0	16.5	15/10/2025 13:25	0.245	0.326	17.572	Sampling visit
MW231S	0.625	1.0	4	0.0	3.0	15/10/2025 13:33	0.993	-0.368	4.000	Sampling visit
MW232D	1.324	18.5	20	0.7	18.4	15/10/2025 10:10	0.916	0.408	-	Gauging visit
MW232D	1.324	18.5	20	0.7	18.4	10/10/2025 12:35	0.815	0.509	21.030	Sampling visit
MW232S	1.148	1.0	4	0.5	3.6	15/10/2025 10:11	1.100	0.048	-	Gauging visit
MW232S	1.148	1.0	4	0.5	3.6	10/10/2025 12:41	0.870	0.278	4.600	Sampling visit
MW238D	2.211	18.5	20	0.0	n/a	20/10/2025 14:52	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
MW238S	2.270	1.0	4	0.0	n/a	20/10/2025 14:55	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
MW240D	5.742	18.5	20	0.0	19.3	9/10/2025 8:26	0.970	4.772	20.290	Sampling visit
MW241D	5.449	18.5	20	0.0	19.3	8/10/2025 12:42	0.705	4.744	20.190	Sampling visit
MW241S	5.559	1.0	4	0.0	2.9	8/10/2025 12:35	0.782	4.777	3.870	Sampling visit
MW247D	2.529	18.5	20	0.0	19.3	15/10/2025 8:26	0.976	1.553	-	Gauging visit
MW247D	2.529	18.5	20	0.0	19.3	8/10/2025 10:44	0.925	1.604	20.300	Sampling visit

Location Code	Top of Casing (mAHD)	Top Screen (mbgl)	Bottom Screen (mbgl)	Stick Up (m)	HydraSleeve Collar Depth (mbTOC)	Gauging (or Visit) Date Time	Water Depth (mbTOC)	Water Elevation (mAHD)	Depth to Base of Well (mbTOC)	Visit / Gauging Comment
MW247S	2.468	1.0	4	0.0	2.8	15/10/2025 8:25	0.881	1.587	-	Gauging visit
MW247S	2.468	1.0	4	0.0	2.8	8/10/2025 10:39	0.820	1.648	3.860	Sampling visit. Well casing damaged. Team repaired while on site
MW252S	1.103	1.0	4	0.0	n/a	8/10/2025 14:55	n/a	n/a	n/a	Unable to access due to well being under flood water
MW256D	1.534	18.5	20	0.0	19.2	15/10/2025 8:55	0.846	0.688	-	Gauging visit
MW256S	1.518	1.0	4	0.0	2.9	15/10/2025 8:57	0.867	0.651	-	Gauging visit
MW257D	1.819	18.5	20	0.0	19.1	15/10/2025 9:04	1.097	0.722	-	Gauging visit
MW257S	1.639	1.0	4	0.0	2.7	15/10/2025 9:04	1.015	0.624	-	Gauging visit
MW260D	2.080	18.5	20	0.0	19.2	15/10/2025 9:29	1.467	0.613	-	Gauging visit
MW260S	2.124	1.0	4	0.0	2.7	15/10/2025 9:28	1.280	0.844	-	Gauging visit
MW262S	0.000	3.0	5	0.0	2.9	14/10/2025 11:15	0.505	-0.505	4.425	Sampling visit
MW264D	9.347	18.5	20	0.0	19.0	7/10/2025 10:46	0.045	9.302	20.020	Sampling visit
MW264S	9.492	1.0	4	0.0	2.2	7/10/2025 10:29	0.139	9.353	3.210	Sampling visit. Well operational however roots present on IP, possible root blockage.
MW266D	0.267	18.5	20	0.0	n/a	16/10/2025 11:54	n/a	n/a	n/a	Unable to access - bolts rusted and rounded
MW266S	0.229	1.0	4	0.0	2.9	16/10/2025 11:46	0.385	-0.156	3.980	Sampling visit. Good condition
MW268D	3.362	18.5	20	0.0	n/a	15/10/2025 10:22	1.580	1.782	20.111	Gauge only
MW268S	3.232	2.0	5	0.0	n/a	15/10/2025 10:24	1.435	1.797	5.000	Gauge only
MW270D	1.412	18.5	20	0.0	19.3	16/10/2025 10:37	0.451	0.961	20.290	Sampling visit
MW270S	1.411	2.0	4	0.0	2.8	16/10/2025 10:42	0.467	0.944	3.819	Sampling visit
MW271D	1.308	18.5	20	0.0	19.5	13/10/2025 11:04	0.325	0.983	20.255	Sampling visit
MW271S	1.316	1.0	4	0.0	3.0	13/10/2025 10:56	0.323	0.993	3.990	Sampling visit
MW278D	1.289	18.5	20	0.0	19.2	10/10/2025 10:58	0.501	0.788	20.260	Sampling visit
MW278S	1.253	1.5	3	0.0	2.0	10/10/2025 11:02	0.500	0.753	3.010	Sampling visit
MW279S	1.295	0.8	3.8	0.8	3.6	8/10/2025 15:06	0.774	0.521	4.630	Sampling visit
MW280S	3.831	1.0	4	0.0	2.8	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW281S	5.290	1.0	4	0.0	2.9	9/10/2025 8:54	0.745	4.545	4.000	Sampling visit
MW282S	5.370	1.0	4	0.0	2.5	9/10/2025 8:38	0.584	4.786	3.460	Sampling visit
MW315D	6.160	18.5	20	0.0	19.4	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW315S	6.180	1.0	4	0.0	2.7	8/10/2025 12:56	n/a	n/a	n/a	Unable to access due to well being under flood water
MW329	6.122	2.4	5.4	0.0	5.1	9/10/2025 8:47	1.451	4.671	6.150	Sampling visit
MW340D	4.955	17.0	20	0.9	20.2	9/10/2025 10:08	1.310	3.645	21.260	Sampling visit
MW340S	4.962	2.0	5	0.9	4.7	9/10/2025 10:13	1.332	3.630	5.720	Sampling visit
MW342D	4.764	17.0	20	0.8	20.2	9/10/2025 9:45	1.149	3.615	21.240	Sampling visit. Good condition. Data logger removed at 9:48am
MW344D	4.521	17.0	20	0.9	18.9	9/10/2025 9:09	1.085	3.436	19.980	Sampling visit. Good condition. Datalogger in well not removed
MW344S	4.777	2.0	5	1.0	4.7	9/10/2025 9:18	1.346	3.431	5.760	Sampling visit
MW354S	4.993	2.0	5	1.0	4.8	9/10/2025 9:57	1.350	3.643	5.860	Sampling visit
MW466	4.320	0.0	0	0.8	2.2	9/10/2025 11:28	1.377	2.943	3.210	Sampling visit
MW468	4.020	1.0	4	0.8	3.0	9/10/2025 11:36	1.000	3.020	4.050	Sampling visit
MW536	1.864	0.0	0	0.0	2.4	13/10/2025 12:56	1.654	0.210	3.060	Sampling visit
MW537	1.579	0.0	0	0.0	1.5	13/10/2025 13:07	1.659	-0.080	3.031	Sampling visit
MW538	1.295	0.0	0	0.0	3.0	13/10/2025 13:43	-	n/a	4.500	Sampling visit. HydraSleeve blocking depth to water.
MW731D	2.190	18.5	20	0.0	20.1	10/10/2025 13:09	1.180	1.010	21.100	Sampling visit
MW731S	2.050	2.5	5.5	0.0	4.9	10/10/2025 13:11	1.040	1.010	6.040	Sampling visit
MW829	0.000	0.0	0	0.0	n/a	7/10/2025 12:24	0.710	-0.710	11.970	Sampling visit. Good condition, silt observed on probe.
MW897D	7.340	17.0	20	0.8	20.0	15/10/2025 12:33	1.840	5.500	-	Gauging visit
MW897S	7.440	3.0	6	0.9	6.0	15/10/2025 12:33	1.912	5.528	-	Gauging visit
POT085	n/a	n/a	n/a	n/a	n/a	20/10/2025 15:00	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
POT236	n/a	n/a	n/a	n/a	n/a	5/11/2025 15:10	n/a	n/a	n/a	Unable to access - unable to confirm residential appointment.
POT365	n/a	n/a	n/a	n/a	n/a	16/10/2025 10:21	n/a	n/a	n/a	Sampling visit
POT382	n/a	n/a	n/a	n/a	n/a	15/10/2025 13:13	n/a	n/a	n/a	Sampling visit

Notes
mAHD meters Australian Height Datum
mbgl meters below ground level
mbTOC meters below Top of Casing
n/a Not applicable or available
- Not measured

Table T2 - Groundwater Quality Parameters and Observations

Location Code	Date	Sample Comment	Sampling Method	Water Quality Parameters					
				Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
				mg/L	°C	µS/cm	pH Units	mV	mV
MW106D	8/10/2025	Clear, no turbidity, slight sulphurous odour, no sheen	HydraSleeve	1.77	17.9	188.5	5.42	96.6	302.4
MW106S	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.99	16.1	173.7	5.49	173.8	379.6
MW108D	10/10/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	0.87	16.4	228.2	6.52	-51.1	154.7
MW108S	9/10/2025	Light brown, no turbidity, no odour, no sheen	HydraSleeve	1.64	15.1	123.4	4.19	-59.7	146.1
MW109D	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.32	17.2	99.3	6.27	-144.4	61.4
MW125D	13/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.18	16.7	888.0	6.26	-191.9	13.9
MW125S	10/10/2025	Brown, no turbidity, organic odour, no sheen	HydraSleeve	1.27	17.8	448.3	5.89	-69.6	136.2
MW126D	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.29	15.9	89.0	6.35	27.1	232.9
MW126S	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.79	15.5	219.7	6.10	12.4	218.2
MW128D	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.28	17.1	1,202.0	7.68	-43.3	162.5
MW128S	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.91	20.7	2,330.0	7.03	3.2	209.0
MW132D	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.85	15.5	164.0	5.25	-87.1	118.7
MW132I	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.75	15.3	121.6	4.43	9.6	215.4
MW137	10/10/2025	Brown, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.17	14.7	167.5	4.74	-51.5	154.3
MW139	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.78	17.2	221.3	4.88	-93.3	112.5
MW142D	13/10/2025	Clear, no turbidity, organic odour, no sheen	HydraSleeve	0.95	15.1	27,784.0	6.41	-117.1	88.7
MW142S	13/10/2025	Clear, no turbidity, organic odour, no sheen	HydraSleeve	0.96	15.3	29,105.0	6.85	-125.6	80.2
MW144	13/10/2025	Brown, medium turbidity, organic odour, no sheen	HydraSleeve	0.16	18.7	5,210.0	8.18	-282.1	-76.3
MW146AD	10/10/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	2.11	18.7	89.5	6.48	-47.2	158.6
MW146S	10/10/2025	Brown, medium turbidity, slight organic odour, no sheen	HydraSleeve	2.12	15.6	232.4	6.17	-0.9	204.9
MW160	8/10/2025	Yellow, no turbidity, organic odour, no sheen	HydraSleeve	1.53	15.0	124.5	4.49	57.2	263.0
MW166	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.44	14.2	55.1	4.96	166.7	372.5
MW167	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.60	14.4	67.9	5.48	88.8	294.6
MW168	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	4.04	15.8	57.1	5.33	120.2	326.0
MW169D	10/10/2025	Clear, no turbidity, no odour, no sheen. Black suspended solids	HydraSleeve	1.85	17.5	81.7	6.30	64.9	270.7
MW169S	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	2.12	16.3	87.8	5.44	131.8	337.6
MW172	9/10/2025	Brown, medium turbidity, no odour, no sheen	HydraSleeve	1.41	14.9	151.9	5.28	-120.2	85.6
MW175D	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.96	16.6	183.3	6.37	-79.6	126.2
MW177	20/10/2025	Brown, high turbidity, organic odour, no sheen	Bailer	2.61	15.6	138.7	5.61	-62.2	143.6
MW178	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.45	17.1	61.6	5.48	-111.2	94.6
MW220S	20/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.98	19.8	2,245.0	5.92	-119.4	86.4
MW230S	15/10/2025	Light yellow, low turbidity, organic odour, no sheen	HydraSleeve	1.80	16.5	514.0	5.70	-13.1	192.7
MW231D	15/10/2025	Light grey, medium turbidity, sulphurous odour, no sheen	HydraSleeve	0.35	18.2	15,352.0	6.89	-179.9	25.9
MW231S	15/10/2025	Light brown, low turbidity, sulphurous odour, no sheen	HydraSleeve	0.76	16.1	16,495.0	6.80	-94.4	111.4
MW232D	10/10/2025	Clear, no turbidity, slight sulp odour, no sheen	HydraSleeve	0.89	16.8	14,771.0	7.24	-128.4	77.4
MW232S	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.47	15.2	1,979.0	7.53	-83.8	122.0
MW240D	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.56	15.1	75.0	5.10	189.0	394.8
MW241D	8/10/2025	Light yellow, no turbidity, no odour, no sheen	HydraSleeve	1.47	20.0	103.2	5.72	-114.5	91.3
MW241S	8/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.99	20.0	82.4	4.83	-90.3	115.5
MW247D	8/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.24	16.8	61.5	4.34	39.4	245.2
MW247S	8/10/2025	Clear, no turbidity, no odour, no sheen. Black suspended solids	HydraSleeve	1.56	18.3	106.0	4.84	-87.6	118.2
MW262S	14/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.14	16.4	3,586.0	5.82	-101.9	103.9
MW264D	7/10/2025	Clear, low turbidity, no odour, no sheen	HydraSleeve	1.68	15.2	245.1	6.14	-106.4	99.4
MW264S	7/10/2025	Clear, no turbidity, no odour, no sheen. White suspended solids	HydraSleeve	1.44	14.5	210.5	4.31	-115.8	90.0
MW266S	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	HydraSleeve	0.90	19.1	42,300.0	6.72	-115.2	90.6
MW270D	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	HydraSleeve	1.06	16.8	97.0	6.40	-120.6	85.2
MW270S	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	HydraSleeve	0.97	16.2	570.0	6.36	-127.1	78.7
MW271D	13/10/2025	Grey, low turbidity, sulphurous odour, no sheen	HydraSleeve	1.18	14.4	353.9	6.55	-67.7	138.1
MW271S	13/10/2025	Clear, no turbidity, sulphurous odour, no sheen. Black suspended solids	HydraSleeve	2.23	14.8	585.0	5.28	-124.3	81.5
MW278D	10/10/2025	Clear, no turbidity, sulph odour, no sheen	HydraSleeve	1.08	17.4	138.2	6.26	-154.8	51.0
MW278S	10/10/2025	Clear, no turbidity, sulphurous odour, no sheen	HydraSleeve	0.66	17.0	280.0	6.09	-188.9	16.9
MW279S	8/10/2025	Grey, medium turbidity, no odour, no sheen. Black sediment in base of hydrasleeve	HydraSleeve	1.24	14.1	943.0	6.64	-170.4	35.4
MW281S	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.00	13.6	133.9	4.67	-98.6	107.2
MW282S	9/10/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	0.80	13.5	80.1	4.18	-60.0	145.8
MW329	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.48	13.2	143.4	4.31	1.5	349.2
MW340D	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.97	15.2	99.8	5.73	-132.4	73.4

Table T2 - Groundwater Quality Parameters and Observations

				Water Quality Parameters					
Location Code	Date	Sample Comment	Sampling Method	Dissolved Oxygen	Temperature	Electrical Conductivity	pH	Oxidation-Reduction Potential Er	Oxidation-Reduction Potential Eh (Corrected)
				mg/L	°C	µS/cm	pH Units	mV	mV
MW340S	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.77	13.4	160.5	4.42	-83.2	122.6
MW342D	9/10/2025	Light grey, low turbidity, slight sulphurous odour, no sheen	HydraSleeve	1.17	16.9	238.8	6.49	-92.7	113.1
MW344D	9/10/2025	Light grey, no turbidity, slight sulphurous odour, no sheen	HydraSleeve	1.43	15.8	238.9	6.88	-134.7	71.1
MW344S	9/10/2025	Clear, no turbidity, no odour, no sheen. White suspended solids	HydraSleeve	1.35	16.1	80.4	5.15	-79.9	125.9
MW354S	9/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	0.90	14.1	151.3	4.88	-92.4	113.4
MW466	9/10/2025	Light yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.21	15.1	154.5	5.13	-89.1	116.7
MW468	9/10/2025	Yellow, no turbidity, sulphurous odour, no sheen	HydraSleeve	1.49	14.1	119.0	5.29	-106.7	99.1
MW536	13/10/2025	Brown, low turbidity, organic odour, no sheen	HydraSleeve	0.79	14.0	23,264.0	6.60	-154.9	50.9
MW537	13/10/2025	Black, high turbidity, organic odour, no sheen	HydraSleeve	0.33	15.4	7,058.0	6.66	-228.8	-23.0
MW538	13/10/2025	Black, medium turbidity, organic odour, no sheen	HydraSleeve	2.25	16.2	12,984.0	6.45	-113.0	92.8
MW731D	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.55	16.3	3,547.0	6.24	-72.5	133.3
MW731S	10/10/2025	Clear, no turbidity, no odour, no sheen	HydraSleeve	1.04	17.6	176.4	5.66	-135.4	70.4
MW829	7/10/2025	Orange, high turbidity, no odour, no sheen	HydraSleeve	3.24	16.3	193.1	5.52	131.3	337.1
POT365	16/10/2025	Clear, no turbidity, slight organic odour, no sheen	Grab - from tap	2.69	16.9	481.6	6.79	109.8	315.6
POT382	15/10/2025	Clear, no turbidity, no odour, no sheen	Grab - from tap	0.71	25.1	2,618.0	7.59	-57.9	147.9

Notes
Corrected field Oxidation-Reduction Potential measurement Eh = Er + 205.8
mg/L milligrams per Litre
°C degrees Celsius
µS/cm microSiemens per centimetre
mV milliVolts
n/a not applicable
- not measured

Table T3 - Surface Water Quality Parameters and Observations

Location Code	Date	Location Comment	Sample Depth From (m)	Sample Depth To (m)	Sample Comment	Water Quality Parameters					
						Dissolved Oxygen mg/L	Temperature °C	Electrical Conductivity µS/cm	pH pH_Units	Oxidation-Reduction Potential Er mV	Oxidation-Reduction Potential Eh (Corrected) mV
SW001	7/10/2025	Creek. 8m wide, 1.5m deep, flow observed.	0.65	0.75	Clear colour, no turbidity, no odour, no sheen.	-	17.5	150.4	5.71	107.7	313.5
SW005	7/10/2025	Creek. 5m wide, 0.5m deep, flow observed.	0.15	0.25	Clear colour, no turbidity, no odour, no sheen.	6.40	17.3	587.0	6.23	108.9	314.7
SW006	7/10/2025	Creek. 3m wide, 10cm deep, no flow.	0.10	0.05	Light brown, no turbidity, no odour, no sheen.	5.90	16.5	263.5	7.46	81.8	287.6
SW007	7/10/2025	Creek. 3m wide, 0.5m deep. Flow observed	0.15	0.25	Clear, no turbidity, no odour, no sheen	8.61	19.3	166.1	7.26	79.0	284.8
SW009	7/10/2025	Creek. 5m wide, 0.3m deep, flow observed.	0.05	0.15	Clear colour, no turbidity, no odour, no sheen.	5.96	17.3	166.3	6.07	100.8	306.6
SW011	7/10/2025	Unable to access due to floodwaters	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SW014	7/10/2025	Creek. 5m wide, 1m deep, flow observed.	0.40	0.50	Clear colour, no turbidity, no odour, no sheen.	5.74	17.8	191.3	6.22	97.3	303.1
SW019	14/10/2025	Creek. 5m wide, 1m deep. No flow observed.	0.40	0.50	Light yellow, no turbidity, no odour, no sheen	5.52	17.5	121.0	7.37	135.5	341.3
SW023	7/10/2025	Creek. 6m wide, 2m deep, no flow.	0.90	1.00	Yellow, no turbidity, no odour, no sheen.	4.60	18.3	1,163.0	7.05	86.6	292.4
SW024	7/10/2025	Creek. 10m wide, 2m deep. No flow.	0.90	1.00	Light yellow, no turbidity, no odour, nosheen	4.17	17.0	9,555.0	6.92	115.6	321.4
SW047	9/10/2025	Creek. 5m wide, 1m deep, no flow	0.40	0.50	Light yellow, no turbidity, no odour, no sheen.	4.50	18.7	135.6	5.83	23.1	228.9
SW048	9/10/2025	Drain. 6m wide, 0.5m deep, no flow.	0.15	0.25	Clear colour, no turbidity, no odour, no sheen.	6.38	19.0	91.4	5.34	59.6	265.4
SW055	9/10/2025	Creek. 3m wide, 0.5m deep. Flow observed	0.20	0.30	Light yellow, no turbidity, no odour, no sheen	2.62	17.6	116.4	5.88	-64.9	140.9
SW059	7/10/2025	Creek. 4m wide, 1m deep, flow observed.	0.40	0.50	Brown, low turbidity, no odour, no sheen.	1.29	15.2	193.9	6.03	31.2	237.0
SW060	7/10/2025	Creek. 4m wide, 1m deep, no flow.	0.40	0.50	Brown, low turbidity, no odour, no sheen.	4.35	19.2	194.1	5.77	139.5	345.3
SW062	7/10/2025	Drain. 6m wide, 1m deep, flow observed.	0.40	0.50	Yellow, low turbidity, no odour, no sheen.	5.40	17.2	1,011.0	7.05	58.8	264.6
SW079	8/10/2025	Creek. 3m wide, 0.5m deep, no flow.	0.15	0.25	Light yellow, no turbidity, no odour, no sheen.	2.60	18.3	2,396.0	6.55	-30.5	175.3
SW081	7/10/2025	Creek. 3m wide, 1m deep, flow observed.	0.40	0.50	Brown, low turbidity, no odour, no sheen.	2.10	15.8	356.9	6.37	61.4	267.2
SW108	9/10/2025	Lake. 200m wide, 1m deep, no flow	0.40	0.50	Light yellow, low turbidity, no odour, no sheen.	7.08	19.8	117.0	6.52	-21.7	184.1
SW110	9/10/2025	Creek. 4m wide, 0.5m deep, flow observed.	0.15	0.25	Clear colour, no turbidity, no odour, no sheen.	6.10	19.6	113.6	6.59	157.6	363.4
SW259	13/10/2025	Creek. 10m wide, 1m deep. Flow observed	0.40	0.50	Clear, no turbidity, no odour, no sheen	4.10	19.2	5,117.0	6.76	63.7	269.5
SW333	13/10/2025	Creek. 3m wide, 2m deep. Flow observed	0.40	0.50	Clear, no turbidity, no odour, no sheen	1.55	17.0	197.0	5.97	3.0	208.8
SW582	10/10/2025	Manhole cover. 1m wide, 0.2m deep. Depth to water 5m. Flow observed	0.05	0.10	Light yellow, no turbidity, no odour, no sheen. Orange suspended solids	4.16	17.4	129.1	5.63	5.7	211.5
SW588	8/10/2025	Drain. 1m long, 0.75m wide, 0.4m deep. No flow observed	0.20	0.30	Light brown, no turbidity, no odour, no sheen	1.07	17.0	168.8	6.19	-119.4	86.4
SW600	13/10/2025	Creek. 5m wide, 1m deep. Flow observed.	0.40	0.50	Light yellow, no turbidity, organic odour, no sheen	4.62	18.3	894.0	7.09	-74.2	131.6

Notes
Corrected field Oxidation-Reduction Potential measurement Eh = Er + 205.8
mg/L milligrams per Litre
°C degrees Celsius
µS/cm microSiemens per centimetre
mV milliVolts
n/a not applicable
- Not measured

Table T4 - Sediment Observations

Location Code	Date	Sample Depth From (m)	Sample Depth To (m)	Sample Comment
SD001	7/10/2025	0.10	0.20	SAND: Brown, medium grain sands, low plasticity, saturated, organic inclusions (rootlets and leaf litter). Sulphurous odour, no staining.
SD005	7/10/2025	0.10	0.20	SILT: brown to black, medium grain sands, small to medium angular gravels, low plasticity, saturated. No odour, no staining
SD006	7/10/2025	0.10	0.20	SAND: Grey, fine to medium grain, small angular gravels, no plasticity, saturated. No odour, no staining.
SD007	7/10/2025	0.10	0.20	Silty SAND: brown, fine to medium grain sands, low plasticity, saturated, organic inclusions (rootlets). No odour, no staining.
SD009	7/10/2025	0.10	0.20	SAND: grey, fine grain sands, no plasticity, damp. No odour, no staining.
SD011	7/10/2025	n/a	n/a	n/a
SD014	7/10/2025	0.10	0.20	SILT: brown, fine grain sands, medium plasticity, damp, organic inclusions (rootlets). No odour, no staining.
SD019	14/10/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, damp, with inclusions (rootlets). No odour, no staining.
SD023	7/10/2025	0.10	0.20	Sandy SILT: orange-brown, medium grain sands, small sub-angular gravels, medium plasticity, damp. No odour, no staining
SD024	7/10/2025	0.10	0.20	SILT: dark brown, fine grain sands, medium plasticity, damp, organic inclusions (rootlets). No odour, no staining
SD047	9/10/2025	0.10	0.20	SAND; light grey to brown, medium grain sands, low plasticity, damp, with organic inclusions (rootlets). No odour, no staining
SD048	9/10/2025	0.10	0.20	SAND: brown, fine to medium grain sands, low plasticity, damp, with organic inclusions (rootlets). No odour, no staining
SD055	9/10/2025	0.10	0.20	sandy SILT: brown, fine to medium grain sands, low plasticity, wet, organic inclusions (rootlets). No odour, no staining
SD059	7/10/2025	0.10	0.20	SAND: grey, fine to medium grain sands, medium angular gravels, no plasticity, saturated, organic inclusions (rootlets). No odour, no staining
SD060	7/10/2025	0.10	0.20	Silty SAND: grey, medium grain sands, low plasticity, damp, organic inclusions (rootlets). No odour, no staining.
SD062	7/10/2025	0.10	0.20	SAND: brown, fine to medium grain sands, low plasticity, damp no odour, no sheen
SD079	8/10/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, damp, organic inclusions (rootlets). No odour, no staining
SD081	7/10/2025	0.10	0.20	SILT: brown to black, fine grain sands, low plasticity, damp, organic inclusions (rootlets). No odour, no staining
SD108	9/10/2025	0.10	0.20	Silty SAND: grey to brown, fine to medium grain sands, no plasticity, saturated, with organic inclusions (rootlets and leaf litter). No odour, no staining
SD110	9/10/2025	0.10	0.20	Sandy SILT: brown, fine to medium grain sands, low plasticity, saturated, organic inclusions (rootlets). No odour, no staining.
SD254	13/10/2025	0.10	0.20	Silty SAND: black, medium to coarse grain, no plasticity, saturated, with inclusions (shell fragments and rootlets). No odour, no staining
SD255	13/10/2025	0.10	0.20	SAND: grey, medium to coarse grain, no plasticity, saturated, with inclusions (shell fragments). No odour, no staining
SD259	13/10/2025	0.10	0.20	SAND: brown to grey, medium grain, no plasticity, saturated. No odour, no staining
SD326	13/10/2025	0.10	0.20	SAND: grey, medium to coarse grain, no plasticity, saturated, with inclusions (shell fragments). No odour, no staining.
SD333	13/10/2025	0.10	0.20	Sandy CLAY: brown, fine grain sands, medium plasticity, damp, with inclusions (rootlets). No odour, no staining
SD600	13/10/2025	0.10	0.20	CLAY: brown, fine grain sands, high plasticity, saturated, with organic inclusions (rootlets). Organic odour, no staining.

Table T5 - Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone		0.01	0.20	0.16	0.36	0.41	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW106D	08 Oct 2025	0908 MW106D 251008	Normal	NSW_0908 PFASOMP 25	On-base	-																																				
MW106S	08 Oct 2025	0908 MW106S 251008	Normal	NSW_0908 PFASOMP 25	On-base	-		<0.01	0.08	0.04	0.12	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW108D	10 Oct 2025	0908 MW108D 251010	Normal	NSW_0908 PFASOMP 25	On-base	-		0.023	0.006	0.555	0.561	0.706	<0.01	0.024	0.038	<0.002	-	<0.002	<0.005	<0.01	0.007	0.045	0.008	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW108S	09 Oct 2025	0908 MW108S 251009	Normal	NSW_0908 PFASOMP 25	On-base	-		0.02	0.45	0.35	0.80	0.86	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW109D	09 Oct 2025	0908 MW109D 251009	Normal	NSW_0908 PFASOMP 25	On-base	-		0.10	3.73	1.07	4.80	5.48	<0.02	0.05	0.07	0.05	0.03	<0.02	<0.05	<0.1	0.08	0.19	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	13 Oct 2025	0908 MW125D 251013	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C		<0.002	0.005	0.004	0.009	0.017	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	0.006	
MW125S	10 Oct 2025	0908 MW125S 251010	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C		<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW125S	10 Oct 2025	0908 QC111 251010	Field_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C		<0.002	<0.002	0.002	0.002	0.018	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	0.016	
MW125S	10 Oct 2025	0908 QC211 251010	Interlab_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C		<0.001	<0.001	0.002	0.002	0.002	-	<0.001	<0.001	<0.001	-	<0.002	-	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.005	<0.01	<0.05	<0.001	<0.001	<0.002	<0.002	<0.01	<0.05	<0.002	<0.05	<0.1	<0.002	<0.5
MW126D	09 Oct 2025	0908 MW126D 251009	Normal	NSW_0908 PFASOMP 25	Primary Management Zone	Risk Zone A		<0.002	0.004	0.003	0.007	0.011	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW126S	09 Oct 2025	0908 MW126S 251009	Normal	NSW_0908 PFASOMP 25	Primary Management Zone	Risk Zone A		0.44	12.6	7.96	20.6	25.8	0.38	0.64	0.72	0.82	<0.02	<0.02	<0.05	0.2	0.28	1.61	0.20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW128D	08 Oct 2025	0908 MW128D 251008	Normal	NSW_0908 PFASOMP 25	Broader Management Zone	Risk Zone C		<0.002	0.002	<0.002	0.002	0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW128S	08 Oct 2025	0908 MW128S 251008	Normal	NSW_0908 PFASOMP 25	Broader Management Zone	Risk Zone C		<0.002	0.008	0.023	0.031	0.031	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW132D	08 Oct 2025	0908 MW132D 251008	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B		0.01	0.16	0.07	0.23	0.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	08 Oct 2025	0908 QC104 251008	Field_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B		<0.01	0.28	0.11	0.39	0.42	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	08 Oct 2025	0908 QC204 251008	Interlab_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B		<0.01	<0.01	0.07	0.07	0.10	-	<0.01	<0.01	0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW132I	08 Oct 2025	0908 MW132I 251008	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B		<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW137	10 Oct 2025	0908 MW137 251010	Normal	NSW_0908 PFASOMP 25	Other: South-west of base	-		<0.002	0.003	0.004	0.007	0.015	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	0.008		
MW139	09 Oct 2025	0908 MW139 251009	Normal	NSW_0908 PFASOMP 25	Broader Management Zone	Risk Zone C		<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW139	09 Oct 2025	0908 MW139 251009	Normal	NSW_0908 PFASOMP 25	Broader Management Zone	Risk Zone C		<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW142D	13 Oct 2025	0908 MW142D 251013	Normal	NSW_0908 PFASOMP 25	Broader Management Zone	Risk Zone C		<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW142S	13 Oct 2025	0908 MW142S 251013	Normal	NSW_0908 PFASOMP 25	Broader Management Zone	Risk Zone C		<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW144	13 Oct 2025	0908 MW144 251013	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C		<0.002	0.189	0.087	0.276	0.372	<0.01	0.034	0.033	0.008	-	<0.002	<0.005	<0.01	0.012	0.003	0.006	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW146AD	10 Oct 2025	0908 MW146AD 251010	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C		<0.002	0.004	<0.002	0.004	0.004	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW146AD	10 Oct 2025	0908 QC112 251010	Field_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C		<0.002	0.002	<0.002	0.002	0.002																														

Table T5 - Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Auction	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																	
MW279S	08 Oct 2025	0908_MW279S_251008	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Risk Zone B	<0.01	0.35	0.74	1.09	1.43	0.03	0.06	0.07	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW281S	09 Oct 2025	0908_MW281S_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	0.45	26.8	2.27	29.1	31.4	0.04	0.15	0.22	0.86	<0.02	<0.02	<0.05	<0.1	0.08	0.48	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW282S	09 Oct 2025	0908_MW282S_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	<0.01	0.22	0.25	0.47	0.50	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW329	09 Oct 2025	0908_MW329_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	0.78	30.2	5.94	36.1	39.1	0.04	0.13	0.27	1.01	0.03	<0.02	<0.05	<0.1	0.05	0.50	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW340D	09 Oct 2025	0908_MW340D_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	0.02	0.03	0.23	0.26	0.52	0.02	0.06	0.04	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW340S	09 Oct 2025	0908_MW340S_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	<0.002	0.009	0.089	0.098	0.162	<0.01	0.011	0.022	<0.002	-	<0.002	<0.005	<0.01	0.005	0.026	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW342D	09 Oct 2025	0908_MW342D_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	<0.01	0.01	0.30	0.31	0.55	0.04	0.06	0.06	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW342D	09 Oct 2025	0908_QC106_251009	Field_D	NSW_0908_PFASOMP_25	On-base	-	<0.01	0.02	0.35	0.37	0.65	0.04	0.08	0.07	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW342D	09 Oct 2025	0908_QC206_251009	Interlab_D	NSW_0908_PFASOMP_25	On-base	-	<0.01	0.02	0.29	0.31	0.51	-	0.08	0.06	<0.01	-	<0.02	-	<0.02	<0.02	0.06	0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW344D	09 Oct 2025	0908_MW344D_251009	Normal	NSW_0908_PFASOMP_25	On-base	Risk Zone B	0.03	0.03	0.29	0.32	0.46	<0.02	0.03	0.03	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	09 Oct 2025	0908_MW344S_251009	Normal	NSW_0908_PFASOMP_25	On-base	Risk Zone B	0.01	0.16	0.12	0.28	0.52	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	0.10	0.09	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW354S	09 Oct 2025	0908_MW354S_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	0.87	16.0	4.94	20.9	24.5	0.04	0.15	0.28	1.43	<0.02	<0.02	<0.05	<0.1	0.07	0.58	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW466	09 Oct 2025	0908_MW466_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	0.21	10.0	2.89	12.9	14.9	0.06	0.16	0.20	0.14	0.09	0.03	<0.05	0.1	0.19	0.59	0.10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW468	09 Oct 2025	0908_MW468_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	0.24	14.4	2.04	16.4	17.9	0.03	0.08	0.10	0.22	0.10	<0.02	<0.05	<0.1	0.12	0.31	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.18	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW536	13 Oct 2025	0908_MW536_251013	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Risk Zone C	<0.002	0.009	0.013	0.022	0.022	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW537	13 Oct 2025	0908_MW537_251013	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Risk Zone C	<0.002	0.039	0.035	0.074	0.082	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	0.003	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW538	13 Oct 2025	0908_MW538_251013	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Risk Zone C	0.014	0.290	0.258	0.548	0.765	0.02	0.047	0.031	0.008	-	<0.002	<0.005	0.02	0.012	0.057	0.008	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW731D	10 Oct 2025	0908_MW731D_251010	Normal	NSW_0908_PFASOMP_25	Primary Management Zone	Risk Zone A	0.25	0.83	3.55	4.38	5.48	<0.02	0.03	0.07	0.08	0.06	0.02	<0.05	<0.1	0.08	0.42	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW731S	10 Oct 2025	0908_MW731S_251010	Normal	NSW_0908_PFASOMP_25	Primary Management Zone	Risk Zone A	0.21	0.87	3.14	4.01	4.97	<0.02	0.03	0.07	0.06	0.05	<0.02	<0.05	<0.1	0.08	0.38	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW829	07 Oct 2025	0908_MW829_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Risk Zone B	<0.01	0.35	0.11	0.46	0.46	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
POT365	16 Oct 2025	0908_POT365_251016	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
POT382	15 Oct 2025	0908_POT382_251015	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Risk Zone C	<0.002	0.002	<0.002	0.002	0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	

Table T6 - Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluoronanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
PFAS NEMP 2025 Recreational water quality guideline	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Freshwater 99%	10	2	2	2																													
EPC Marine	19	0.0023																															
EPC Region 1		1.78	1.48																														
EPC Region 2		5.035	1.666																														
EPC Region 3		1.47	1.009																														
		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Table T7 - Sediment Analytical Results

					PFAS				PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides											
					Perfluorooctanoic acid (PFDA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDA)	Perfluorotridecanoic acid (PFTDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSAE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSAE)		
					mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0005	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0001	mg/kg 0.0001	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005	mg/kg 0.0005	mg/kg 0.0005	mg/kg 0.0002	mg/kg 0.0005
LOR																																							
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.0002	0.0042	0.0006	0.0048	0.0048	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	
SD001	07 Oct 2025	0908_SD001_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002	0.0124	0.0006	0.0130	0.0132	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	
SD005	07 Oct 2025	0908_QC100_251007	Field D	NSW_0908_PFASOMP_25	Broader Management Zone	<0.0001	0.0046	0.0003	0.0050	0.0050	-	<0.0001	<0.0001	<0.0001	-	<0.0002	-	<0.0002	<0.0002	0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
SD005	07 Oct 2025	0908_QC200_251007	Interlab D	NSW_0908_PFASOMP_25	Broader Management Zone	<0.0001	0.0046	0.0003	0.0050	0.0050	-	<0.0001	<0.0001	<0.0001	-	<0.0002	-	<0.0002	<0.0002	0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
SD005	07 Oct 2025	0908_SD005_251007	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	<0.0002	0.0128	0.0009	0.0137	0.0140	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD006	07 Oct 2025	0908_SD006_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002	0.0051	<0.0002	0.0051	0.0051	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD007	07 Oct 2025	0908_SD007_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002	0.0299	0.0016	0.0315	0.0333	<0.0005	<0.0002	<0.0002	<0.0002	0.0004	0.0007	-	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005
SD009	07 Oct 2025	0908_SD009_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002	0.0109	0.0007	0.0116	0.0118	<0.0005	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD014	07 Oct 2025	0908_SD014_251007	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	<0.0002	0.0391	0.0021	0.0412	0.0423	<0.0005	<0.0002	<0.0002	0.0002	0.0004	<0.0002	-	<0.001	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD019	14 Oct 2025	0908_SD019_251014	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	0.0006	0.0333	0.0014	0.0347	0.0364	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0008	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD023	07 Oct 2025	0908_SD023_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002	0.0003	<0.0002	0.0003	0.0003	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD024	07 Oct 2025	0908_SD024_251007	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	0.0003	0.0252	0.0008	0.0260	0.0265	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005		
SD047	09 Oct 2025	0908_SD047_251009	Normal	NSW_0908_PFASOMP_25	On-base	0.0014	0.0608	0.0070	0.0678	0.0719	<0.0005	<0.0002	0.0002	0.0008	0.0005	0.0002	-	<0.001	0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD048	09 Oct 2025	0908_SD048_251009	Normal	NSW_0908_PFASOMP_25	On-base	<0.0002	0.0033	0.0008	0.0041	0.0041	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD055	09 Oct 2025	0908_SD055_251009	Normal	NSW_0908_PFASOMP_25	On-base	0.0003	0.0185	0.0039	0.0224	0.0261	<0.0005	<0.0002	0.0002	0.0006	0.0003	0.0018	-	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD059	07 Oct 2025	0908_SD059_251007	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	<0.0002	0.0009	<0.0002	0.0009	0.0012	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD060	07 Oct 2025	0908_SD060_251007	Normal	NSW_0908_PFASOMP_25	Primary Management Zone	0.0013	0.129	0.0130	0.142	0.152	<0.0005	0.0011	0.0014	0.0024	0.0003	<0.0002	-	<0.001	0.0005	0.0024	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD062	07 Oct 2025	0908_QC103_251007	Field D	NSW_0908_PFASOMP_25	Broader Management Zone	<0.0002	0.0004	<0.0002	0.0004	0.0004	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0005	<0.0002	<0.0005	
SD062	07 Oct 2025	0908_QC203_251007	Interlab D	NSW_0908_PFASOMP_25	Broader Management Zone	<0.0001	0.0001	<0.0001	0.0001	0.0001	-	<0.0001	<0.0001	<0.0001	-	<0.0002	-	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0002	<0.0002	<0.001	<0.001	<0.0002	<0.001		
SD062	07 Oct 2025	0908_SD062_251007	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	<0.0002	<0.0002	<0.0002	<0.00																														

[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.01	0.08	0.11	0.19	0.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW106S	23 Nov 2023	0908 MW106S 231123	Normal	NSW_0908 PFASOMP_23	On-base	-	0.01	0.08	0.11	0.19	0.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW106S	19 Apr 2024	0908 MW106S 240419	Normal	NSW_0908 PFASOMP_24	On-base	-	0.01	0.18	0.1	0.28	0.29	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW106S	24 Sep 2024	0908 MW106S 240924	Normal	NSW_0908 PFASOMP_24	On-base	-	<0.01	0.14	0.05	0.19	0.19	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW106S	03 Apr 2025	0908 MW106S 250403	Normal	NSW_0908 PFASOMP_25	On-base	-	<0.01	0.07	0.01	0.08	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW106S	08 Oct 2025	0908 MW106S 251008	Normal	NSW_0908 PFASOMP_25	On-base	-	<0.01	0.08	0.04	0.12	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	13 Apr 2015	MW107-D_20150413	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	-	-	-	<0.01	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-	-	<0.05	-	-	
MW107D	10 Mar 2016	MW107D_10032016	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	
MW107D	01 Feb 2017	MW107D_GW_01022017	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
MW107D	01 Feb 2017	QC820_GW_01022017	Interlab_D	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.02	<0.01	<0.02	<0.02	-	-	<0.01	-	-	-	<0.02	-	<0.05	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.05	-	<0.05	<0.05	-	<0.02	-	-	-	-	-	
MW107D	01 May 2018	MW107D_GW_01052018	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	07 Aug 2018	0908 MW107D 180807	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	07 Sep 2018	0908 MW107D 180907	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	05 Oct 2018	0908 MW107D 181005	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	27 Nov 2018	0908 MW107D 181127	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	23 Jan 2019	0908 MW107D 190123	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	23 Jan 2019	0908 QC101_190123	Field_D	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	23 Jan 2019	0908 QC201_190123	Interlab_D	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.01	<0.02	<0.01	-	-	-	<0.01	<0.01	<0.01	-	<0.01	-	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
MW107D	29 Mar 2019	0908 MW107D 190329	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	31 May 2019	0908 MW107D 190531	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	18 Jun 2019	0908 MW107D 190618	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW107D	25 Sep 2019	0908 MW107D 190925	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.0005	<0.0003	<0.0005	<0.0003	0.028	-	<0.0005	<0.0005	<0.0005	-	<0.0005	-	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.028	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001
MW107D	19 Nov 2019	0908 MW107D 191119	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	19 Nov 2019	0908 QC107_191119	Field_D	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW107D	19 Nov 2019	0908 QC207_191119	Interlab_D	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.02	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
MW107D	02 Dec 2019	0908 MW107D 191202	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.0005	0.004	<0.0005	0.0042	0.0562	-	<0.0005	<0.0005	<0.0005	-	<0.0005	-	<0.0020	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	0.052	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	
MW107D	12 Mar 2020	0908 MW107D 200312	Normal	NSW_0908 PFASMGMT	Secondary Management Zone	Risk Zone C	<0.0005	0.005	<0.0005	0.0053	0.0132	-	<0.0005	<0.0005	<0.0005	-	<0.0005	-	0.006	<0.0005	0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.0005	<0.001	<0.0005	<0.001	
MW107D	19 May 2020	0908 MW107D 200519	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<																						

[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.04	0.87	1.01	1.88	2.3	-	0.07	0.09	0.04	-	<0.02	-	<0.1	0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW123	23 May 2019	0908 MW123 190523	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	0.04	0.87	1.01	1.88	2.3	-	0.07	0.09	0.04	-	<0.02	-	<0.1	0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW123	05 Nov 2019	0908 MW123 191105	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.04	0.89	1.04	1.93	2.31	-	0.06	0.07	0.05	-	<0.02	-	<0.1	<0.02	0.16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW123	26 May 2021	0908 MW123 210526	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.58	0.54	1.12	1.34	-	0.04	0.04	0.04	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW123	09 Nov 2021	0908 MW123 211109	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.01	0.34	0.25	0.59	0.67	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW123	09 Nov 2021	0908 QC101 211109	Field_D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.01	0.37	0.27	0.64	0.72	-	<0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW123	18 May 2022	0908 MW123 220518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.1	0.08	0.18	0.18	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW123	08 Nov 2022	0908 MW123 221108	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.4	0.33	0.73	0.86	-	0.02	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW123	09 May 2023	0908 MW123 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.02	0.41	0.39	0.8	0.97	-	0.03	0.04	0.03	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW123	21 Nov 2023	0908 MW123 231121	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.01	0.35	0.21	0.56	0.61	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW123	16 Apr 2024	0908 MW123 240416	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.09	0.05	0.14	0.14	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW123	03 Apr 2025	0908 MW123 250403	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	0.04	0.02	0.06	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	07 Feb 2017	MW125D_GW_07022017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	26 Mar 2018	MW125D_GW_26032018	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	20 Nov 2018	0908 MW125D 181120	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	22 May 2019	0908 MW125D 190522	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	0.01	<0.02	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	22 May 2019	0908 MW125D 190522	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW125D	22 May 2019	0908 MW125D 190522	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	01 Nov 2019	0908 MW125D 191101	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	13 May 2020	0908 MW125D 200513	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	24 Nov 2020	0908 MW125 D 201124	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	13 May 2021	0908 MW125D 210513	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	09 Nov 2021	0908 MW125D 211109	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	09 Nov 2022	0908 MW125D 221109	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	09 May 2023	0908 MW125D 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	09 May 2023	0908 MW125D 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	09 May 2023	0908 MW125D 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW125D	09 May 2023	0908 MW125D 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone																																			

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW126D	23 Nov 2023	0908 MW126D 231123	Normal	NSW_0908 PFASOMP 23	Primary Management Zone	Risk Zone A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW126D	16 Apr 2024	0908 MW126D 240416	Normal	NSW_0908 PFASOMP 24	Primary Management Zone	Risk Zone A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW126D	16 Apr 2024	0908 QC102 240416	Field_D	NSW_0908 PFASOMP 24	Primary Management Zone	Risk Zone A	<0.01	0.01	<0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126D	16 Apr 2024	0908 QC202 240416	Interlab_D	NSW_0908 PFASOMP 24	Primary Management Zone	Risk Zone A	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
MW126D	23 Sep 2024	0908 MW126D 240923	Normal	NSW_0908 PFASOMP 24	Primary Management Zone	Risk Zone A	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126D	03 Apr 2025	0908 MW126D 250403	Normal	NSW_0908 PFASOMP 25	Primary Management Zone	Risk Zone A	<0.002	0.034	0.011	0.045	0.095	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	0.01	0.026	0.007	0.007	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW126D	09 Oct 2025	0908 MW126D 251009	Normal	NSW_0908 PFASOMP 25	Primary Management Zone	Risk Zone A	<0.002	0.004	0.003	0.007	0.011	<0.01	<0.002	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW126S	13 Nov 2014	MW126 13112014	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.04	0.07	0.49	0.56	-	-	0.05	-	-	-	-	<0.01	-	-	<0.01	0.24	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	-	-	<0.05	-
MW126S	03 Feb 2016	MW126 03022016	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.16	0.49	-	0.49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	<0.05	-	-	-
MW126S	19 Dec 2016	MW126S_GW_19122016	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.33	2.26	6.11	8.37	11.6	-	0.36	0.42	0.51	-	<0.02	-	<0.1	0.2	1.19	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW126S	26 Mar 2018	MW126S_GW_26032018	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.09	1.44	1.59	3.03	4.19	-	0.2	0.16	0.18	-	<0.02	-	<0.1	0.09	0.37	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	26 Mar 2018	QC100_GW_26032018	Field_D	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.09	1.42	1.69	3.11	4.3	-	0.2	0.16	0.19	-	<0.02	-	<0.1	0.08	0.39	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	26 Mar 2018	QC200_GW_26032018	Interlab_D	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.077	0.65	1.3	1.95	-	-	0.14	0.13	0.12	<0.01	<0.01	<0.02	0.067	0.053	0.3	0.043	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
MW126S	26 Nov 2018	0908 MW126S 181126	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.13	1.63	2.64	4.27	5.82	-	0.28	0.28	0.21	-	<0.02	-	<0.1	0.1	0.48	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	21 May 2019	0908 MW126S 190521	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.38	3.6	7.04	10.6	15.6	-	0.88	1.03	0.55	-	<0.02	-	<0.1	0.29	1.6	0.23	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	21 May 2019	0908 MW126S 190521	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	-	-	-	10.64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW126S	21 May 2019	0908 QC100 190521	Field_D	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.38	3.63	7.29	10.9	15.9	-	0.88	1.06	0.55	-	<0.02	-	<0.1	0.27	1.6	0.23	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	21 May 2019	0908 QC100 190521	Field_D	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	-	-	-	10.92	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MW126S	21 May 2019	0908 QC200 190521	Interlab_D	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.32	3.1	8.2	11.3	-	-	0.77	0.72	0.34	<0.01	<0.01	<0.02	0.19	0.27	1.5	0.18	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
MW126S	01 Nov 2019	0908 MW126S 191101	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.35	3.86	7.02	10.9	15.6	-	1.02	0.7	0.55	-	<0.02	-	0.2	0.25	1.44	0.19	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	13 May 2020	0908 MW126S 200513	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.53	8.44	8.7	17.1	23.2	-	0.97	1.16	0.7	-	<0.02	-	<0.1	0.33	2.08	0.32	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	13 May 2020	0908 QC102 200513	Field_D	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.56	9.2	8.52	17.7	24	-	0.93	1.34	0.79	-	<0.02	-	<0.1	0.31	1.97	0.34	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	13 May 2020	0908 QC202 200513	Interlab_D	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.32	5.3	6	-	-	-	0.75	0.76	0.35	<0.01	<0.01	<0.02	0.17	0.27	1.3	0.18	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	<0.05	
MW126S	24 Nov 2020	0908 MW126 S_201124	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.54	9.88	6.73	16.6	22.8	-	0.89	1.12	0.87	-	<0.02	-	0.2	0.33	1.96	0.28	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	19 May 2021	0908 MW126S 210519	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.4	10.2	7.3	17.5	22.5	-	0.66	0.86	0.81	-	<0.02	-	0.1	0.24	1.72	0.24	<																
MW126S	09 Nov 2021	0908 MW126S 211109	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.25	6.08	6.26	12.3	15.8	-	0.52	0.45	0.43	-	<0.02	-	<0.1	0.18	1.5	0.16	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	31 May 2022	0908 MW126S 220531	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.28	6.02	5.03	11	14.4	-	0.37	0.47	0.61	-	<0.02	-	0.1	0.14	1.25	0.17	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	09 Nov 2022	0908 MW126S 221109	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.45	7.02	10.3	17.3	23.6	-	0.7	0.85	0.79	-	<0.02	-	0.2	0.38	2.61	0.31	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW126S	11 May 2023	0908 MW126S 230511	Normal	NSW_0908 PFASOMP 23	Primary Management Zone	Risk Zone A	0.68	7.94	13.1	21	28	-	0.93	0.55	0.51	-	<0.02	-	0.2	0.47	3.25	0.39	<0.0																

[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.04	0.44	0.7	1.14	1.39	-	<0.02	0.04	0.1	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	08 Nov 2022	0908 MW132D 221108	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.04	0.44	0.7	1.14	1.39	-	<0.02	0.04	0.1	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	11 May 2023	0908 MW132D 230511	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.03	0.89	0.32	1.21	1.42	-	0.02	<0.02	0.1	-	<0.02	-	<0.1	0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	23 Nov 2023	0908 MW132D 231123	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.02	0.78	0.23	1.01	1.13	-	<0.02	<0.02	0.07	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	23 Nov 2023	0908 QC103 231123	Field_D	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.02	0.74	0.2	0.94	1.07	-	<0.02	<0.02	0.08	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	23 Nov 2023	0908 QC203 231123	Interlab_D	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.02	0.76	0.24	1	1.1	-	<0.01	0.01	0.08	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.01	<0.02	<0.5
MW132D	22 Apr 2024	0908 MW132D 240422	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	0.02	0.94	0.23	1.17	1.27	-	<0.02	<0.02	0.08	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	26 Sep 2024	0908 MW132D 240926	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	0.01	1.07	0.26	1.33	1.42	-	<0.02	<0.02	0.05	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	10 Apr 2025	0908 MW132D 250410	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.01	0.89	0.24	1.13	1.22	<0.02	<0.02	<0.02	0.05	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	10 Apr 2025	0908 QC114 250410	Field_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.01	0.78	0.22	1	1.07	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	10 Apr 2025	0908 QC214 250410	Interlab_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.02	0.86	0.25	1.1	1.2	-	<0.01	0.01	0.05	-	<0.02	-	<0.02	<0.02	0.03	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.01	<0.02	<0.1	
MW132D	08 Oct 2025	0908 MW132D 251008	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.01	0.16	0.07	0.23	0.27	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	08 Oct 2025	0908 QC104 251008	Field_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	0.28	0.11	0.39	0.42	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW132D	08 Oct 2025	0908 QC204 251008	Interlab_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	<0.01	0.07	0.07	0.1	-	<0.01	<0.01	0.01	-	<0.02	-	<0.02	<0.02	0.02	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.01	<0.02	<0.5	
MW132I	14 Apr 2015	MW132I_20150414	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.01	<0.01	0.05	0.05	-	-	<0.01	-	-	-	<0.01	-	-	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	0.01	-	<0.05	<0.05	-	-	<0.05	-	-
MW132I	14 Apr 2015	QC200-HW_20150414	Field_D	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	<0.02	0.93	0.28	1.21	-	-	<0.02	-	-	-	<0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.5	-	<0.1	-	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5
MW132I	18 Jan 2016	MW132I_18012016	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	0.78	0.4	1.18	-	-	0.02	-	-	-	<0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.5	-	<0.1	<0.1	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5
MW132I	01 Feb 2017	MW132I_GW_01022017	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	0.43	0.09	0.52	0.52	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	06 Nov 2019	0908 MW132S_191106	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.84	0.45	1.29	1.41	-	0.03	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	14 May 2020	0908 MW132S_200514	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.46	0.13	0.59	0.63	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	17 Nov 2020	0908 MW132_S_201117	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.74	0.1	0.84	0.86	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	27 May 2021	0908 MW132S_210527	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.22	0.09	0.31	0.31	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	15 Nov 2021	0908 MW132S_211115	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.4	0.18	0.58	0.6	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	30 May 2022	0908 MW132S_220530	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.34	0.14	0.48	0.48	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	30 May 2022	0908 QC118 220530	Field_D	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.52	0.2	0.72	0.72	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	08 Nov 2022	0908 MW132S_221108	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.24	0.05	0.29	0.29	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	11 May 2023	0908 MW132S_230511	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	<0.01	0.22	0.05	0.27	0.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW132I	23 Nov 2023	0908 MW132S_231123	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	<0.01	0.18	0.05	0.23	0.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<											

[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS in Drinking Water (ADWG 2025)	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2			1																										
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	<0.01	<0.02	<0.01	0.17	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.17	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	26 Nov 2020	0908 MW146A D 201126	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	13 May 2021	0908 MW146AD 210513	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	09 Nov 2021	0908 MW146AD 211109	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	31 May 2022	0908 MW146AD 220531	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	0.27	0.01	0.28	0.28	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	09 Nov 2022	0908 MW146AD 221109	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	0.1	<0.01	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	09 May 2023	0908 MW146AD 230509	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	23 Nov 2023	0908 MW146AD 231123	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	0.03	<0.01	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	16 Apr 2024	0908 MW146AD 240416	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone C	0.04	1.87	0.6	2.47	2.73	-	0.03	0.04	0.05	-	<0.02	-	<0.1	<0.02	0.08	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	23 Sep 2024	0908 MW146AD 240923	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146AD	03 Apr 2025	0908 MW146AD 250403	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	0.005	<0.002	0.005	0.005	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW146AD	03 Apr 2025	0908 QC103 250403	Field_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	0.005	<0.002	0.005	0.005	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW146AD	03 Apr 2025	0908 QC203 250403	Interlab_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.001	0.004	0.001	0.005	0.005	-	<0.001	<0.001	<0.001	-	<0.001	-	<0.01	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.02	<0.05	<0.1	<0.002	<0.5
MW146AD	10 Oct 2025	0908 MW146AD 251010	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	0.004	<0.002	0.004	0.004	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW146AD	10 Oct 2025	0908 QC112 251010	Field_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	0.002	<0.002	0.002	0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005
MW146AD	10 Oct 2025	0908 QC212 251010	Interlab_D	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.001	0.002	<0.001	0.002	0.002	-	<0.001	<0.001	<0.001	-	<0.002	-	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.02	<0.05	<0.1	<0.002	<0.5
MW146S	03 Feb 2016	MW146S 03022016	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-
MW146S	20 Dec 2016	MW146S GW 20122016	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	26 Mar 2018	MW146S GW 26032018	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	20 Nov 2018	0908 MW146S 181120	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	21 May 2019	0908 MW146S 190521	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	06 Nov 2019	0908 MW146S 191106	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	20 May 2020	0908 MW146S 200520	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	26 Nov 2020	0908 MW146S S 201126	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	09 Nov 2021	0908 MW146S 211109	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	0.01	<0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	09 Nov 2022	0908 MW146S 221109	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	09 May 2023	0908 MW146S 230509	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW146S	24 Nov 2023	0908 MW146S 231124	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.						

[illegible]

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	Risk Score																																							
MW161D	26 May 2021	0908 MW161D 210526	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.05	1.6	0.86	2.46	2.97	-	0.07	0.08	0.06	-	<0.02	-	<0.1	0.05	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05					
MW161D	01 Jun 2022	0908 MW161D 220601	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.06	1.94	0.85	2.79	3.3	-	0.06	0.09	0.08	-	<0.02	-	<0.1	0.04	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05					
MW161D	11 May 2023	0908 MW161D 230511	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.05	1.89	0.74	2.63	3.11	-	0.06	0.08	0.06	-	<0.02	-	<0.1	0.05	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05					
MW161D	22 Apr 2024	0908 MW161D 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161D	10 Apr 2025	0908 MW161D 250410	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.01	0.67	0.21	0.88	0.93	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161D	10 Apr 2025	0908 QC115 250410	Field_D	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.01	0.46	0.18	0.64	0.68	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161D	10 Apr 2025	0908 QC215 250410	Interlab_D	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.02	0.67	0.25	0.92	1	-	0.02	0.02	0.02	-	<0.02	-	<0.02	<0.02	0.04	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5							
MW161S	26 Feb 2016	MW161S 26022016	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	0.04	2.26	1.32	3.58	-	-	0.13	-	-	-	<0.02	-	-	-	0.23	0.04	<0.02	<0.02	<0.05	<0.05	<0.05	<0.5	-	<0.1	<0.1	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5							
MW161S	26 Feb 2016	MW161S 26022016	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	0.07	2.98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
MW161S	08 Feb 2017	MW161S_GW_08022017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	0.08	2.66	1.4	4.06	4.75	-	0.09	0.11	0.06	-	<0.02	-	<0.1	0.06	0.19	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW161S	30 May 2019	0908 MW161S 190530	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	0.03	1.91	1.09	3	3.24	-	0.03	0.04	0.05	-	<0.02	-	<0.1	0.02	0.07	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161S	21 May 2020	0908 MW161S 200521	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.06	2.39	1.22	3.61	4.28	-	0.12	0.1	0.07	-	<0.02	-	<0.1	0.06	0.23	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161S	26 May 2021	0908 MW161S 210526	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.05	3.64	0.96	4.6	5.14	-	0.06	0.08	0.08	-	<0.02	-	<0.1	0.05	0.16	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.04	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161S	01 Jun 2022	0908 MW161S 220601	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.07	2.39	0.84	3.23	3.74	-	0.05	0.07	0.09	-	<0.02	-	<0.1	0.04	0.14	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161S	11 May 2023	0908 MW161S 230511	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.04	1.84	0.72	2.56	2.91	-	0.03	0.04	0.04	-	<0.02	-	<0.1	0.04	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW161S	22 Apr 2024	0908 MW161S 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW161S	10 Apr 2025	0908 MW161S 250410	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	0.05	2.01	0.55	2.56	2.85	<0.02	0.02	0.04	0.05	<0.02	<0.02	<0.05	<0.1	0.03	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW162D	29 Jan 2016	MW162D 29012016	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-							
MW162D	10 Jan 2017	MW162D_GW_10012017	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW162D	27 Mar 2018	MW162D_GW_27032018	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	20 Nov 2018	0908 MW162D 181120	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW162D	22 May 2019	0908 MW162D 190522	Normal	NSW 0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	04 Nov 2019	0908 MW162D 191104	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	18 May 2020	0908 MW162D 200518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	23 Nov 2020	0908 MW162_D_201123	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	18 May 2021	0908 MW162D 210518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	18 May 2021	0908 QC104 210518	Field_D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	12 Nov 2021	0908 MW162D 211112	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05						
MW162D	18 May 2022	0908 MW162D 220518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05							
MW162D	18 May 2022	0908 QC208 220518	Interlab_D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	&																		

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									</
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[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids												PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides					
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	1	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03																														
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																			
MW169S	30 May 2019	0908 MW169S 190530	Normal	NSW_0908 PFAS	On-base	-	0.03	0.17	0.35	0.52	0.69	-	<0.02	<0.02	0.07	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW169S	24 Sep 2019	0908 MW169S 190924	Normal	NSW_0908 PFASMGMT	On-base	-	0.02	0.1	0.46	0.56	0.72	-	<0.02	0.03	0.04	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW169S	07 Nov 2019	0908 MW169S 191107	Normal	NSW_0908 PFASOMP	On-base	-	0.02	0.15	0.37	0.52	0.62	-	<0.02	<0.02	0.04	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	13 May 2020	0908 MW169S 200513	Normal	NSW_0908 PFASOMP	On-base	-	<0.05	0.31	0.26	0.57	0.62	-	<0.05	<0.05	0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	<0.05		
MW169S	16 Nov 2020	0908 MW169 S 201116	Normal	NSW_0908 PFASOMP	On-base	-	<0.01	0.13	0.21	0.34	0.39	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW169S	18 May 2021	0908 MW169S 210518	Normal	NSW_0908 PFASOMP	On-base	-	0.02	0.11	0.27	0.38	0.57	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	16 Nov 2021	0908 MW169S 211116	Normal	NSW_0908 PFASOMP	On-base	-	0.01	0.11	0.15	0.26	0.42	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.03	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	19 May 2022	0908 MW169S 220519	Normal	NSW_0908 PFASOMP	On-base	-	0.01	0.12	0.13	0.25	0.37	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	09 Nov 2022	0908 MW169S 221109	Normal	NSW_0908 PFASOMP	On-base	-	0.01	0.08	0.15	0.23	0.44	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.05	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	10 May 2023	0908 MW169S 230510	Normal	NSW_0908 PFASOMP_23	On-base	-	<0.01	0.07	0.16	0.23	0.3	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	22 Nov 2023	0908 MW169S 231122	Normal	NSW_0908 PFASOMP_23	On-base	-	<0.01	0.04	0.14	0.18	0.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	17 Apr 2024	0908 MW169S 240417	Normal	NSW_0908 PFASOMP_24	On-base	-	<0.01	0.07	0.25	0.32	0.32	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	24 Sep 2024	0908 MW169S 240924	Normal	NSW_0908 PFASOMP_24	On-base	-	<0.01	0.07	0.09	0.16	0.16	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	04 Apr 2025	0908 MW169S 250404	Normal	NSW_0908 PFASOMP_25	On-base	-	<0.01	0.15	0.1	0.25	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW169S	10 Oct 2025	0908 MW169S 251010	Normal	NSW_0908 PFASOMP_25	On-base	-	0.01	3.15	0.12	3.27	3.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171D	15 Jan 2016	MW171D 15012016	Normal	NSW_0908 PFAS	On-base	-	0.12	4.97	-	4.97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-	-	-		
MW171D	31 Aug 2016	MW171D 310816	Normal	NSW_0908 PFAS	On-base	-	0.03	2.2	0.47	2.67	-	0.03	-	-	-	<0.01	-	<0.05	0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	<0.05	-	-	<0.05	-	
MW171D	12 Oct 2016	MW171D 121016	Normal	NSW_0908 PFAS	On-base	-	0.02	1.5	0.41	1.91	-	0.06	-	-	-	<0.01	-	<0.05	<0.01	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-		
MW171D	13 Jan 2017	MW171D 130117	Normal	ACTNSW_Hist_202012-3	On-base	-	0.02	1.1	0.33	-	-	0.08	-	-	-	<0.01	-	<0.05	0.02	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	<0.05	-	<0.05	-	
MW171D	24 Jan 2017	MW171D_GW_24012017	Normal	NSW_0908 PFAS	On-base	-	0.01	0.18	0.61	0.79	1.34	-	0.18	0.17	<0.02	-	<0.02	-	<0.1	0.04	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW171D	24 Jan 2017	MW171D_GW_25012017	Normal	NSW_0908 PFAS	On-base	-	<0.01	<0.01	0.42	0.42	2.69	-	0.64	0.37	<0.02	-	<0.02	-	<0.1	0.21	1	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW171D	03 May 2017	MW171D 030517	Normal	ACTNSW_Hist_202012-3	On-base	-	0.03	1.8	0.74	-	-	<0.01	0.17	0.07	-	<0.01	-	<0.05	0.05	0.22	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW171D	04 Apr 2018	MW171D_GW_04042018	Normal	NSW_0908 PFAS	On-base	-	<0.01	0.07	0.5	0.57	1.15	-	0.16	0.18	<0.02	-	<0.02	-	<0.1	0.04	0.18	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05		
MW171D	22 Nov 2018	0908 MW171D 181122	Normal	NSW_0908 PFAS	On-base	-	0.02	0.99	0.2	1.19	1.68	-	<0.02	<0.02	0.03	-	<0.02	-	0.4	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171D	30 May 2019	0908 MW171D 190530	Normal	NSW_0908 PFAS	On-base	-	0.03	2.23	0.35	2.58	2.77	-	0.04	0.03	0.04	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW171D	25 Oct 2019	0908 MW171D 191025	Normal	NSW_0908 PFASMGMT	On-base	-	0.09	2.93	1	3.93	4.36	-	0.02	0.03	0.14	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.09	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW171D	15 May 2020	0908 MW171D 200515	Normal	NSW_0908 PFASOMP	On-base	-	0.07	0.47	0.7	1.2	1.5	-	<0.02	0.02	0.14	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05			
MW171D	17 May 2021	0908 MW171D 210517	Normal	NSW_0908 PFASOMP	On-base	-	0.03	0.03	0.48	0.51	0.84	-	0.08	0.08	0.03	-	<0.02	-	<0.1	<0.02	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone
MW171S	24 Jun 2021	0908 MW171S_210624	Normal	NSW_0908 PFASMGMT	On-base	-
MW171S	24 Sep 2021	0908 MW171S_210924	Normal	NSW_0908 PFASMGMT	On-base	-
MW171S	24 Sep 2021	0908 QC201_210924	Interlab_D	NSW_0908 PFASMGMT	On-base	-
MW171S	12 Jan 2022	0908 MW171S_220112	Normal	NSW_0908 PFASMGMT	On-base	-
MW171S	12 Jan 2022	0908 QC100_220112	Field_D	NSW_0908 PFASMGMT	On-base	-
MW171S	12 Jan 2022	0908 QC200_220112	Interlab_D	NSW_0908 PFASMGMT	On-base	-
MW171S	14 Mar 2022	0908 MW171S_220314	Normal	NSW_0908 PFASMGMT	On-base	-
MW171S	14 Mar 2022	0908 QC100_220314	Field_D	NSW_0908 PFASMGMT	On-base	-
MW171S	14 Mar 2022	0908 QC200_220314	Interlab_D	NSW_0908 PFASMGMT	On-base	-
MW171S	19 May 2022	0908_MW171S_220519	Normal	NSW_0908 PFASOMP	On-base	-
MW171S	21 Jun 2022	0908 MW171S_220621	Normal	NSW_0908 PFASMGMT	On-base	-
MW171S	21 Jun 2022	0908 QC201_220621	Interlab_D	NSW_0908 PFASMGMT	On-base	-
MW171S	12 Sep 2022	0908 MW171S_220912	Normal	NSW_0908 PFASMGMT	On-base	-
MW171S	12 Sep 2022	0908 QC100_220912	Field_D	NSW_0908 PFASMGMT	On-base	-
MW171S	10 May 2023	0908 MW171S_230510	Normal	NSW_0908 PFASOMP_23	On-base	-
MW171S	17 Apr 2024	0908 MW171S_240417	Normal	NSW_0908 PFASOMP_24	On-base	-
MW171S	04 Apr 2025	0908_MW171S_250404	Normal	NSW_0908 PFASOMP_25	On-base	-
MW1712	14 Jan 2016	MW172_14012016	Normal	NSW_0908 PFAS	On-base	-
MW1712	14 Jan 2016	QC102_WG_14012016	Field_D	NSW_0908 PFAS	On-base	-
MW1712	02 Sep 2016	MW172_020916	Normal	NSW_0908 PFAS	On-base	-
MW1712	12 Oct 2016	MW172_121016	Normal	NSW_0908 PFAS	On-base	-
MW1712	16 Jan 2017	MW172_160117	Normal	ACTNSW_Hist_202012-3	On-base	-
MW1712	16 Jan 2017	MW172_160117	Normal	NSW_0908 PFAS	On-base	-
MW1712	25 Jan 2017	MW172_GW_25012017	Normal	NSW_0908 PFAS	On-base	-
MW1712	03 May 2017	MW172_030517	Normal	ACTNSW_Hist_202012-3	On-base	-
MW1712	09 Aug 2018	0908 MW172_180809	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	05 Sep 2018	0908 MW172_180905	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	03 Oct 2018	0908 MW172_181003	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	29 Nov 2018	0908 MW172_181129	Normal	NSW_0908 PFAS	On-base	-
MW1712	29 Nov 2018	0908 MW172_181129	Normal	NSW_0908 PFAS	On-base	-
MW1712	23 Jan 2019	0908 MW172_190123	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	02 Apr 2019	0908 MW172_190402	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	30 May 2019	0908 MW172_190530	Normal	NSW_0908 PFAS	On-base	-
MW1712	30 May 2019	0908 MW172_190530	Normal	NSW_0908 PFAS	On-base	-
MW1712	20 Jun 2019	0908 MW172_190620	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	24 Sep 2019	0908 MW172_190924	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	07 Nov 2019	0908 MW172_191107	Normal	NSW_0908 PFASOMP	On-base	-
MW1712	29 Nov 2019	0908 MW172_191129	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	29 Nov 2019	0908 QC101_191129	Field_D	NSW_0908 PFASMGMT	On-base	-
MW1712	29 Nov 2019	0908 QC201_191129	Interlab_D	NSW_0908 PFASMGMT	On-base	-
MW1712	13 Mar 2020	0908 MW172_200313	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	15 May 2020	0908 MW172_200515	Normal	NSW_0908 PFASOMP	On-base	-
MW1712	22 Jun 2020	0908 MW172_200622	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	30 Sep 2020	0908 MW172_200930	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	30 Sep 2020	0908 QC101_200930	Field_D	NSW_0908 PFASMGMT	On-base	-
MW1712	30 Sep 2020	0908 QC201_200930	Interlab_D	NSW_0908 PFASMGMT	On-base	-
MW1712	16 Nov 2020	0908 MW172_201116	Normal	NSW_0908 PFASOMP	On-base	-
MW1712	14 Jan 2021	0908 MW172_210114	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	26 Mar 2021	0908 MW172_210326	Normal	NSW_0908 PFASMGMT	On-base	-
MW1712	17 May 2021	0908 MW172_210517	Normal	NSW_0908 PFASOMP	On-base	-</

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.08	0.55	0.72	1.27	1.87	-	0.12	0.1	0.05	-	<0.02	-	<0.1	0.03	0.19	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188D	22 May 2019	0908 MW188D 190522	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.08	0.55	0.72	1.27	1.87	-	0.12	0.1	0.05	-	<0.02	-	<0.1	0.03	0.19	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188D	13 May 2020	0908 MW188D 200513	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.25	5.41	3.11	8.52	11.2	-	0.58	0.52	0.34	-	<0.02	-	<0.1	0.12	0.7	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188D	12 May 2021	0908 MW188D 210512	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.05	0.99	0.71	1.7	2.14	-	0.11	0.08	0.08	-	<0.02	-	<0.1	<0.02	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW188D	18 Apr 2024	0908 MW188D 240418	Normal	NSW_0908 PFASOMP_24	Primary Management Zone	Risk Zone A	0.19	3.41	1.88	5.29	7.03	-	0.27	0.23	0.22	-	<0.02	-	<0.1	0.09	0.5	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188D	03 Apr 2025	0908 MW188D 250403	Normal	NSW_0908 PFASOMP_25	Primary Management Zone	Risk Zone A	<0.01	0.04	<0.01	0.04	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW188S	22 Jan 2016	MW188 22012016	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.09	0.49	<0.02	0.49	-	-	<0.02	-	-	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.5	-	<0.1	<0.1	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5
MW188S	22 Jan 2016	QC111_WG_22012016	Field_D	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.08	0.5	<0.02	0.5	-	-	<0.02	-	-	-	<0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.5	-	<0.1	<0.1	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5
MW188S	19 Dec 2016	MW188S_GW_19122016	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.02	0.91	0.24	1.15	1.19	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW188S	03 Feb 2017	MW188S_GW_03022017	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.04	0.66	0.16	0.82	0.9	-	0.01	<0.01	0.01	-	<0.01	-	<0.1	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02	<0.01	<0.02
MW188S	27 Mar 2018	MW188S_GW_27032018	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	0.02	0.34	0.05	0.39	0.41	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188S	20 Nov 2018	0908 MW188S 181120	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	<0.01	0.68	0.17	0.85	0.85	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188S	21 May 2019	0908 MW188S 190521	Normal	NSW_0908 PFAS	Primary Management Zone	Risk Zone A	<0.01	0.19	0.04	0.23	0.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188S	13 May 2020	0908 MW188S 200513	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.08	3.14	0.66	3.8	4.4	-	0.1	0.09	0.07	-	<0.02	-	<0.1	0.04	0.18	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW188S	12 May 2021	0908 MW188S 210512	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	0.09	2.93	0.82	3.75	4.5	-	0.12	0.09	0.09	-	<0.02	-	<0.1	0.07	0.24	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW188S	31 May 2022	0908 MW188S 220531	Normal	NSW_0908 PFASOMP	Primary Management Zone	Risk Zone A	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188S	11 May 2023	0908 MW188S 230511	Normal	NSW_0908 PFASOMP_23	Primary Management Zone	Risk Zone A	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188S	16 Apr 2024	0908 MW188S 240416	Normal	NSW_0908 PFASOMP_24	Primary Management Zone	Risk Zone A	0.01	0.14	0.11	0.25	0.3	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW188S	03 Apr 2025	0908 MW188S 250403	Normal	NSW_0908 PFASOMP_25	Primary Management Zone	Risk Zone A	0.09	2.51	0.71	3.22	3.98	0.04	0.12	0.1	0.08	<0.02	<0.02	<0.05	<0.1	0.06	0.23	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW19S	27 Jan 2016	MW19S 27012016	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
MW19S	09 Feb 2017	MW19S_GW_09022017	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	<0.01	<0.01	0.07	0.07	0.13	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW19S	27 Mar 2018	MW19S_GW_27032018	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.02	0.17	0.16	0.33	0.46	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.05	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW19S	27 Nov 2018	0908 MW19S 181127	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.01	0.06	0.22	0.28	0.39	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.04	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW19S	27 May 2019	0908 MW19S 190527	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.01	0.05	0.18	0.23	0.29	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW19S	13 May 2020	0908 MW19S 200513	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.08	0.22	0.3	0.42	-	0.03	<0.02	<0.02	-	<0.02	-	<0.1	0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW19S	12 May 2021	0908 MW19S 210512	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	<0.01	0.05	0.07	0.12	0.12	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW19S	16 May 2022	0908 MW19S 220516	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.01	0.05	0.09	0.14	0.17	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW19S	09 May 2023	0908 MW19S 230509	Normal	NSW_0908 PFASOMP_23	Secondary Management Zone	Risk Zone B	0.01	0.1	0.1	0.2	0.21	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW19S	16 Apr 2024	0908 MW19S 240416	Normal	NSW_0908 PFASOMP_24	Secondary Management Zone	Risk Zone B	<0.01	0.07	0.11	0.18	0.18	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.																					

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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS in Drinking Water (ADWG 2025)	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2			1																										
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	15 Nov 2021	0908 MW241D 211115	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	24 May 2022	0908 MW241D 220524	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	10 Nov 2022	0908 MW241D 221110	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	12 May 2023	0908 MW241D 230512	Normal	NSW_0908 PFASOMP 23	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	23 Nov 2023	0908 MW241D 231123	Normal	NSW_0908 PFASOMP 23	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	23 Apr 2024	0908 MW241D 240423	Normal	NSW_0908 PFASOMP 24	Other: West of base	-	<0.01	0.01	<0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	31 Jul 2024	0908 MW241D 240731	Normal	NSW_0908 PFASOMP 24	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	23 Sep 2024	0908 MW241D 240923	Normal	NSW_0908 PFASOMP 24	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	23 Sep 2024	0908 QC106 240923	Field_D	NSW_0908 PFASOMP 24	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	23 Sep 2024	0908 QC206 240923	Interlab_D	NSW_0908 PFASOMP 24	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241D	09 Apr 2025	0908 MW241D 250409	Normal	NSW_0908 PFASOMP 25	Other: West of base	-	<0.002	0.011	<0.002	0.011	0.011	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241D	08 Oct 2025	0908 MW241D 251008	Normal	NSW_0908 PFASOMP 25	Other: West of base	-	<0.002	0.004	<0.002	0.004	0.004	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW241S	08 Feb 2017	MW241S_GW_08022017	Normal	NSW_0908 PFAS	Other: West of base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	27 Apr 2018	MW241S_GW_27042018	Normal	NSW_0908 PFAS	Other: West of base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	27 Nov 2018	0908 MW241S 181127	Normal	NSW_0908 PFAS	Other: West of base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	26 Nov 2020	0908 MW241_S_2011126	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	20 May 2021	0908 MW241S 210520	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	0.02	<0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	15 Nov 2021	0908 MW241S 211115	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	24 May 2022	0908 MW241S 220524	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	10 Nov 2022	0908 MW241S 221110	Normal	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	10 Nov 2022	0908 QC115 221110	Field_D	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	10 Nov 2022	0908 QC215 221110	Interlab_D	NSW_0908 PFASOMP	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.01	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW241S	12 May 2023	0908 MW241S 230512	Normal	NSW_0908 PFASOMP 23	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	23 Nov 2023	0908 MW241S 231123	Normal	NSW_0908 PFASOMP 23	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	23 Apr 2024	0908 MW241S 240423	Normal	NSW_0908 PFASOMP 24	Other: West of base	-	<0.01	<0.01	0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW241S	31 Jul 2024	0908 MW241S 240731	Normal	NSW_0908 PFASOMP 24	Other: West of base	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0																								

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	0.07	0.04	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247D	08 May 2023	0908 MW247D 230508	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	<0.01	0.07	0.04	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247D	24 Nov 2023	0908 MW247D 231124	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	<0.01	0.07	0.04	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247D	22 Apr 2024	0908 MW247D 240422	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.06	0.04	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247D	23 Sep 2024	0908 MW247D 240923	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.06	0.04	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247D	23 Sep 2024	0908 QC107 240923	Field_D	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.06	0.04	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247D	23 Sep 2024	0908 QC207 240923	Interlab_D	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.06	0.04	0.1	0.1	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW247D	03 Apr 2025	0908 MW247D 250403	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	0.04	0.03	0.07	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247D	08 Oct 2025	0908 MW247D 251008	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247S	01 Feb 2017	MW247S_GW_01022017	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.03	0.21	0.76	0.97	1.43	-	<0.02	0.09	<0.02	-	<0.02	-	<0.1	<0.02	0.34	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247S	01 Feb 2017	QC821_GW_01022017	Interlab_D	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.037	0.19	1.1	1.29	-	-	0.057	-	-	-	<0.02	-	<0.05	0.042	0.14	0.029	<0.01	<0.02	<0.02	<0.02	<0.05	<0.05	-	<0.05	<0.05	-	<0.02	-	-	-	-	-	
MW247S	28 Feb 2017	MW247S_GW_280217	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.09	0.27	1.21	1.48	2.1	-	0.09	0.09	0.06	-	<0.02	-	<0.1	0.06	0.2	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247S	12 Apr 2018	MW247S_GW_12042018	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.06	1.24	0.5	1.74	2.12	-	<0.02	0.03	0.06	-	<0.02	-	<0.1	<0.02	0.12	<0.02	<0.02	<0.02	0.05	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	0.06	<0.02	<0.05	<0.05	<0.02	<0.05
MW247S	30 Nov 2018	0908 MW247S 181130	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.02	0.48	0.61	1.09	1.48	-	0.06	0.07	0.02	-	<0.02	-	<0.1	0.04	0.18	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	31 May 2019	0908 MW247S 190531	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone B	0.02	1.88	0.29	2.17	2.29	-	<0.02	0.02	0.04	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	06 Nov 2019	0908 MW247S 191106	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	1.35	0.44	1.79	2.04	-	0.04	0.02	0.03	-	<0.02	-	<0.1	0.03	0.11	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	15 May 2020	0908 MW247S 200515	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	1.93	0.38	2.31	2.46	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	0.05	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	24 Nov 2020	0908 MW247_S_201124	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.93	0.1	2.03	1.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	18 May 2021	0908 MW247S 210518	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.55	1.75	2.3	3.01	-	0.09	0.22	<0.02	-	<0.02	-	<0.1	0.03	0.27	0.08	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW247S	12 Nov 2021	0908 MW247S 211112	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.04	0.96	1.09	2.05	2.5	-	0.07	0.09	0.03	-	<0.02	-	<0.1	0.03	0.15	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	18 May 2022	0908 MW247S 220518	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.33	0.7	1.03	1.33	-	0.04	0.05	0.02	-	<0.02	-	<0.1	0.04	0.13	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	08 Nov 2022	0908 MW247S 221108	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone B	0.02	0.46	0.86	1.32	1.61	-	0.05	0.05	0.02	-	<0.02	-	<0.1	0.03	0.12	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	08 May 2023	0908 MW247S 230508	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	0.02	0.24	0.54	0.78	1.02	-	0.03	0.04	0.02	-	<0.02	-	<0.1	0.03	0.1	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	24 Nov 2023	0908 MW247S 231124	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone B	<0.01	0.23	0.08	0.31	0.35	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	22 Apr 2024	0908 MW247S 240422	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	0.01	0.79	0.3	1.09	1.12	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	23 Sep 2024	0908 MW247S 240923	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone B	<0.01	0.06	0.11	0.17	0.23	-	0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	03 Apr 2025	0908 MW247S 250403	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	0.21	0.38	0.59	0.65	<0.02	0.03	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW247S	08 Oct 2025	0908 MW247S 251008	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone B	<0.01	0.2	0.34	0.54	0.56	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.05													

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	&
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																		
MW257S	08 May 2023	0908 MW257S 230508	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW257S	21 Nov 2023	0908 MW257S 231121	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW257S	16 Apr 2024	0908 MW257S 240416	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone C	<0.01	0.01	<0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW257S	03 Nov 2024	0908 MW257S 241113	Normal	NSW_0908 PFASMGMT 24	Secondary Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW257S	03 Apr 2025	0908 MW257S 250403	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	<0.002	<0.002	<0.002	<0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW260D	08 Feb 2017	MW260D_GW_080217	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	06 Apr 2018	MW260D_GW_06042018	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	<0.05		
MW260D	19 Nov 2018	0908 MW260D 181119	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
MW260D	24 May 2019	0908 MW260D 190524	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.04	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	24 May 2019	0908 MW260D 190524	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW260D	05 Nov 2019	0908 MW260D 191105	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	<0.05		
MW260D	19 May 2020	0908 MW260D 200519	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	24 Nov 2020	0908 MW260D 201124	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	14 May 2021	0908 MW260D 210514	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.02	0.02	0.12	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.07	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	12 Nov 2021	0908 MW260D 211112	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	18 May 2022	0908 MW260D 220518	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	08 Nov 2022	0908 MW260D 221108	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	08 May 2023	0908 MW260D 230508	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	21 Nov 2023	0908 MW260D 231121	Normal	NSW_0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	18 Apr 2024	0908 MW260D 240418	Normal	NSW_0908 PFASOMP 24	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260D	03 Apr 2025	0908 MW260D 250403	Normal	NSW_0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	0.002	0.036	0.038	0.055	<0.01	0.007	0.006	<0.002	-	<0.002	<0.005	<0.01	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.005	<0.002	<0.005	
MW260S	08 Feb 2017	MW260S_GW_080217	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	0.09	0.03	0.12	0.12	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260S	06 Apr 2018	MW260S_GW_06042018	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	0.02	0.04	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260S	19 Nov 2018	0908 MW260S 181119	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	0.03	0.08	0.11	1.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.91	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260S	24 May 2019	0908 MW260S 190524	Normal	NSW_0908 PFAS	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260S	05 Nov 2019	0908 MW260S 191105	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	0.01	0.03	0.04	0.04	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW260S	18 May 2020	0908 MW260S 200518	Normal	NSW_0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	0.03	0.02	0.05	0.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02																

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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[illegible]

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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	-	-	-	223.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			</
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Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																		
MW318D	15 Nov 2021	0908 MW318D 211115	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	0.02	0.03	0.52	0.55	1.31	-	0.22	0.15	<0.02	-	<0.02	-	<0.1	0.05	0.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW318D	31 May 2022	0908 MW318D 220531	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	0.02	0.04	0.6	0.64	1.38	-	0.19	0.2	<0.02	-	<0.02	-	<0.1	0.05	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW318D	31 May 2022	0908 QC219 220531	Interlab_D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	0.02	0.04	0.55	0.59	1.3	-	0.18	0.14	0.02	-	<0.02	-	0.03	0.05	0.26	0.02	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW318D	08 Nov 2022	0908 MW318D 221108	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.17	0.17	0.48	-	0.09	0.09	<0.02	-	<0.02	-	0.01	0.02	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW318D	11 May 2023	0908 MW318D 230511	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	0.04	0.28	0.32	0.63	-	0.09	0.08	<0.02	-	<0.02	-	<0.1	0.02	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW318D	23 Nov 2023	0908 MW318D 231123	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	0.04	0.41	0.45	0.86	-	0.1	0.08	<0.02	-	<0.02	-	<0.1	0.03	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW318D	22 Apr 2024	0908 MW318D 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone C	0.03	0.1	0.73	0.83	1.31	-	0.07	0.11	0.03	-	<0.02	-	<0.1	0.03	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW318D	10 Apr 2025	0908 MW318D 250410	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	0.05	0.27	0.96	1.23	1.79	0.03	0.06	0.11	0.05	<0.02	<0.02	<0.05	<0.1	0.03	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW318S	19 Nov 2019	0908 MW318S 191119	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	19 Nov 2019	0908 QC109 191119	Field_D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	19 Nov 2019	0908 QC209 191119	Interlab_D	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.02	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.05	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.05	<0.02	<0.01	
MW318S	21 May 2020	0908 MW318S 200521	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	25 Nov 2020	0908 MW318 S 201125	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	20 May 2021	0908 MW318S 210520	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	15 Nov 2021	0908 MW318S 211115	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	0.01	<0.01	0.01	0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	31 May 2022	0908 MW318S 220531	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	08 Nov 2022	0908 MW318S 221108	Normal	NSW 0908 PFASOMP	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	11 May 2023	0908 MW318S 230511	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	23 Nov 2023	0908 MW318S 231123	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	Risk Zone C	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	22 Apr 2024	0908 MW318S 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	Risk Zone C	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW318S	10 Apr 2025	0908 MW318S 250410	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	Risk Zone C	<0.002	<0.002	0.007	0.007	0.007	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.002	<0.005	<0.002	<0.005	<0.002	<0.005		
MW329	23 Oct 2019	0908 MW329 191023	Normal	NSW 0908 PFASMGMT	On-base	-	12.9	321	41.8	363	402	-	1.13	2.97	14	-	<0.02	-	0.4	0.84	6.06	1.13	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW329	09 Nov 2020	0908 MW329 201109	Normal	NSW 0908 PFASMGMT	On-base	-	2.48	178	15.9	194	210	-	0.82	1.75	5.42	-	<0.02	-	0.3	0.61	3.95	0.53	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW329	18 Apr 2024	0908 MW329 240418	Normal	NSW 0908 PFASOMP 24	On-base	-	2.32	165	12.7	178	188	-	0.47	0.99	3.72	-	<0.02	-	0.2	0.3	1.97	0.33	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW329	25 Sep 2024	0908 MW329 240925	Normal	NSW 0908 PFASOMP 24	On-base	-	0.67	43.5	3.84	47.3	51.1	-	0.19	0.24	1.92	-	<0.02	-	<0.1	0.1	0.52	0.1	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW329	16 Apr 2025	0908 MW329 250416	Normal	NSW 0908 PFASOMP 25	On-base	-	1.03	32	3.79	35.8	40.1	0.06	0.19	0.24	1.88	<0.02	<0.02	<0.05	<0.1	0.11	0.72	0.12	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW329	09 Oct 2025	0908 MW329 251009	Normal	NSW 0908 PFASOMP 25	On-base	-	0.78	30.2	5.94	36.1	39.1	0.04	0.13	0.27	1.01	0.03	<0.02	<0.05	<0.1	0.05	0.5	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
MW340D	09 Nov 2020	0908 MW340D 201109	Normal	NSW 0908 PFASMGMT	On-base	-	<0.01	0.2	0.02	0.22	0.22	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW340D	09 Nov 2020	0908 QC104 201109	Field_D	NSW 0908 PFASMGMT	On-base	-	<0.01	0.24	0.03	0.27	0.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05				
MW340D	18 Apr 2024	0908 MW340D 240418	Normal	NSW 0908 PFASOMP 24	On-base	-	0.04	0.25	0.44	0.69	1.12	-	0.09	0.09	<0.02	-	<0.02	-	<0.1	0.03	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
MW340D	25 Sep 2024	0908 MW340D 240925	Normal	NSW 0908 PFASOMP 24	On-base	-	0.04	0.1	0.46	0.56	0.97	-	0.09	0.08	<0.02	-	<0.02	-	<0.1	0.03	0.14	<0.02	<0.02																	

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides						
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUNDA)	Perfluorododecanoic acid (PFDDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS in Drinking Water (ADWG 2025)	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational water quality guideline	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Freshwater 99%	10	2	2	2																													
EPC Risk Zone A	19	0.0023																															
EPC Risk Zone B				190.3																													
EPC Risk Zone C & D				5.67																													
				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	0.01	0.54	0.13	0.67	0.87	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	0.04	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	25 Sep 2024	0908_QC109_240925	Field_D	NSW_0908 PFASOMP_24	On-base	Risk Zone B	0.01	0.54	0.13	0.67	0.87	-	0.04	0.04	<0.02	-	<0.02	-	<0.1	0.04	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	25 Sep 2024	0908_QC209_240925	Interlab_D	NSW_0908 PFASOMP_24	On-base	Risk Zone B	0.01	0.53	0.15	0.68	0.89	-	0.04	0.04	0.01	-	<0.02	-	<0.02	0.03	0.06	0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	16 Apr 2025	0908_MW344S_250416	Normal	NSW_0908 PFASOMP_25	On-base	Risk Zone B	<0.01	0.46	0.06	0.52	0.54	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW344S	09 Oct 2025	0908_MW344S_251009	Normal	NSW_0908 PFASOMP_25	On-base	Risk Zone B	0.01	0.16	0.12	0.28	0.52	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	0.1	0.09	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW354S	09 Nov 2020	0908_MW354_201109	Normal	NSW_0908 PFASMGMT	On-base	-	4.07	88.9	31.4	120	153	-	2.04	4.47	9.84	-	<0.02	-	0.7	1.33	8.66	1.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW354S	05 Oct 2023	0908_MW354S_231005	Normal	NSW_0908 PFASMGMT_23	On-base	-	3.21	26.8	13.8	40.6	51	-	0.51	0.77	2.76	-	<0.02	-	0.2	0.32	2.26	0.36	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW354S	14 Nov 2023	0908_MW354S_231114	Normal	NSW_0908 PFASMGMT_23	On-base	-	5.77	47.7	13.1	60.8	75.6	-	0.36	0.74	5.37	-	<0.02	-	0.1	0.28	1.9	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW354S	18 Apr 2024	0908_MW354S_240418	Normal	NSW_0908 PFASOMP_24	On-base	-	4.34	70.9	10.9	81.8	97.2	-	0.49	0.75	6.88	-	<0.02	-	0.2	0.38	1.99	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW354S	25 Sep 2024	0908_MW354S_240925	Normal	NSW_0908 PFASOMP_24	On-base	-	1.72	27.6	14.5	42.1	50.9	-	0.44	0.8	3.1	-	<0.02	-	0.2	0.28	1.75	0.42	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW354S	16 Apr 2025	0908_MW354S_250416	Normal	NSW_0908 PFASOMP_25	On-base	-	1.92	45.4	9.36	54.8	62.2	0.05	0.21	0.49	3.51	<0.02	<0.02	<0.05	<0.1	0.12	0.84	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW354S	09 Oct 2025	0908_MW354S_251009	Normal	NSW_0908 PFASOMP_25	On-base	-	0.87	16	4.94	20.9	24.5	0.04	0.15	0.28	1.43	<0.02	<0.02	<0.05	<0.1	0.07	0.58	0.18	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	09 Feb 2016	W6_09022016	Normal	NSW_0908 PFAS	On-base	-	<0.01	<0.01	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	-	-	-	-	-	-	-		
MW406	25 Aug 2016	W6_250816	Normal	NSW_0908 PFAS	On-base	-	0.01	0.03	0.04	0.07	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-	
MW406	19 Oct 2016	QC105_191016	Field_D	NSW_0908 PFAS	On-base	-	<0.01	0.01	0.04	0.05	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW406	19 Oct 2016	W6_191016	Normal	NSW_0908 PFAS	On-base	-	<0.01	0.02	0.03	0.05	-	-	<0.01	-	-	-	<0.01	-	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	-	<0.05	-	<0.05	-	-	<0.05	-	
MW406	11 Jan 2017	QC811_GW_11012017	Interlab_D	NSW_0908 PFAS	On-base	-	<0.02	<0.01	0.034	0.034	-	-	<0.01	-	-	-	<0.02	-	<0.05	<0.02	0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.05	-	<0.05	<0.05	-	<0.02	-	-	-	-	-		
MW406	12 Jan 2017	W6_GW_12012017	Normal	NSW_0908 PFAS	On-base	-	<0.01	<0.01	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	03 Apr 2018	W6_GW_03042018	Normal	NSW_0908 PFAS	On-base	-	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	03 Apr 2018	W6_GW_03042018	Normal	NSW_0908 PFAS	On-base	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW406	29 Jun 2018	0908_W6_180629	Normal	NSW_0908_PStage2	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05		
MW406	21 Nov 2018	0908_W6_181121	Normal	NSW_0908 PFAS	On-base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	28 May 2019	0908_W6_190528	Normal	NSW_0908 PFAS	On-base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	12 May 2020	0908_MW406_200512	Normal	NSW_0908 PFASOMP	On-base	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	19 May 2021	0908_MW406_210519	Normal	NSW_0908 PFASOMP	On-base	-	<0.01	0.03	0.03	0.06	0.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	24 May 2022	0908_MW406_220524	Normal	NSW_0908 PFASOMP	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	24 May 2022	0908_QC113_220524	Field_D	NSW_0908 PFASOMP	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	24 May 2022	0908_QC213_220524	Interlab_D	NSW_0908 PFASOMP	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
MW406	08 May 2023	0908_MW406_230508	Normal	NSW_0908 PFASOMP_23	On-base	-	<0.01	<0.01	0.03	0.03	0.03	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
MW406	08 May 2023	0908_QC100_230508	Field_D	NSW_0908 PFASOMP_23	On-base	-	<0.01	<0.01	0.02	0.02	0.02	-	<0.02	<0.02	<0.0																									

[illegible]

Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS in Drinking Water (ADWG 2025)	0.2	0.008	0.03				1																										
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Auction	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Table T8 - Historical Groundwater Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS in Drinking Water (ADWG 2025)	0.0005	0.0002	0.0005	0.0002	0.0002	0.01	0.0005	0.0005	0.0005	0.001	0.0005	0.002	0.002	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	0.0005	0.001	0.0005	0.001	0.001	0.0005	0.001
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2			1																										
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Risk Zone A				190.3																													
EPC Risk Zone B				5.67																													
EPC Risk Zone C & D				0.05																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone	<0.01	0.03	0.02	0.05	0.05	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW829	07 Apr 2025	0908_QC208_250407	Interlab_D	NSW_0908_PFAASOMP_25	Secondary Management Zone	Risk Zone B	<0.01	0.03	0.02	0.05	0.05	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
MW829	07 Oct 2025	0908_MW829_251007	Normal	NSW_0908_PFAASOMP_25	Secondary Management Zone	Risk Zone B	<0.01	0.35	0.11	0.46	0.46	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MW842	24 Mar 2017	SK3496_D_24032017	Normal	NSW_0908_PFAAS	Broader Management Zone	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW842	22 May 2019	0908_SK3496_D_190522	Normal	NSW_0908_PFAAS	Broader Management Zone	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW842	25 May 2021	0908_MW842_210525	Normal	NSW_0908_PFAASOMP	Broader Management Zone	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW842	02 Jun 2022	0908_MW842_220602	Normal	NSW_0908_PFAASOMP	Broader Management Zone	-	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW842	18 May 2023	0908_MW842_230518	Normal	NSW_0908_PFAASOMP_23	Broader Management Zone	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW842	23 Apr 2024	0908_MW842_240423	Normal	NSW_0908_PFAASOMP_24	Broader Management Zone	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW842	10 Apr 2025	0908_MW842_250410	Normal	NSW_0908_PFAASOMP_25	Broader Management Zone	-	<0.002	0.027	0.003	0.03	0.042	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.001	<0.002	0.003	0.009	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
MW844	24 Mar 2017	SK3496_S_24032017	Normal	NSW_0908_PFAAS	Broader Management Zone	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW844	22 May 2019	0908_SK3496_S_190522	Normal	NSW_0908_PFAAS	Broader Management Zone	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW844	25 May 2021	0908_MW844_210525	Normal	NSW_0908_PFAASOMP	Broader Management Zone	-	<0.01	<0.01	<0.02	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW844	02 Jun 2022	0908_MW844_220602	Normal	NSW_0908_PFAASOMP	Broader Management Zone	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW844	18 May 2023	0908_MW844_230518	Normal	NSW_0908_PFAASOMP_23	Broader Management Zone	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW844	23 Apr 2024	0908_MW844_240423	Normal	NSW_0908_PFAASOMP_24	Broader Management Zone	-	<0.01	0.02	<0.01	0.02	0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW844	31 Jul 2024	0908_MW844_240731	Normal	NSW_0908_PFAASOMP_24	Broader Management Zone	-	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW844	10 Apr 2025	0908_MW844_250410	Normal	NSW_0908_PFAASOMP_25	Broader Management Zone	-	<0.002	0.002	<0.002	0.002	0.002	<0.01	<0.002	<0.002	<0.002	-	<0.002	<0.005	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		
MW886	06 Jun 2019	DF1G_MW02_060619	Normal	NSW_0908_FSBGME	On-base	-	0.28	46.4	3.96	50.4	51.8	-	0.03	0.08	0.74	-	<0.02	-	<0.1	0.06	0.24	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
MW886	29 Apr 2021	0908_MW886_210429	Normal	NSW_0908_PCAEST0013	On-base	-	0.55	59	4.3	63.3	65.18	<0.01	0.02	0.03	0.37	0.05	<0.01	-	0.2	0.16	0.39	0.09	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		
MW886	23 Apr 2024	0908_MW886_240423	Normal	NSW_0908_PFAASOMP_24	On-base	-	0.2	66.2	1.8	68	69.5	-	0.05	0.08	0.43	-	<0.02	-	<0.1	0.06	0.32	0.05	0.03	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
MW886	03 Apr 2025	0908_MW886_250403	Normal	NSW_0908_PFAASOMP_25	On-base	-	0.15	33.1	2.33	35.4	36.3	<0.02	0.02	0.05	0.34	<0.02	<0.02	<0.05	<0.1	0.04	0.22	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
MW897D	12 Aug 2021	0908_MW897D_210812	Normal	NSW_0908_PFAASMGMT	Secondary Management Zone	Risk Zone B	0.02	1.02	0.28	1.3	1.4	-	<0.02	<0.02	0.06	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW897D	12 Aug 2021	0908_QC100_210812	Field_D	NSW_0908_PFAASMGMT	Secondary Management Zone	Risk Zone B	0.02	0.92	0.27	1.19	1.28	-	<0.02	<0.02	0.05	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW897D	24 Apr 2024	0908_MW897D_240424	Normal	NSW_0908_PFAASOMP_24	Secondary Management Zone	Risk Zone B	<0.01	0.5	0.08	0.58	0.58	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
MW897D	24 Apr 2024	0908_QC111_240424	Field_D	NSW_0908_PFAASOMP_24	Secondary Management Zone	Risk Zone B	<0.01	0.75	0.07	0.82	0.85	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
MW897D	24 Apr 2024	0908_QC211_240424	Interlab_D	NSW_0908_PFAASOMP_24	Secondary Management Zone	Risk Zone B	<0.01	0.55	0.09	0.63	0.65	-	<0.01	<0.01	0.02	-	<0.02	-	<0.02	<0.02	<0.01	<0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
MW897D	03 Apr 2025	0908_MW897D_250403	Normal	NSW_0908_PFAASOMP_25	Secondary Management Zone	Risk Zone B	<0.01	0.26	0.02	0.28	0.28	<0.02	<0.02	<0.02	<0.02																									

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Risk Zone
POT144	04 Jun 2019	0908_BWS144_190604	Normal	NSW_0908_PFAFAS	Broader Management Zone	-
POT144	27 May 2020	0908_POT144_200527	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	-
POT144	13 May 2021	0908_POT144_210513	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	-
POT144	16 May 2022	0908_POT144_220516	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	-
POT144	17 May 2023	0908_POT144_230517	Normal	NSW_0908_PFAFASOMP_23	Broader Management Zone	-
POT144	09 May 2024	0908_POT144_240509	Normal	NSW_0908_PFAFASOMP_24	Broader Management Zone	-
POT144	03 Apr 2025	0908_POT144_250403	Normal	NSW_0908_PFAFASOMP_25	Broader Management Zone	-
POT236	24 Aug 2016	BWS236_240816	Normal	NSW_0908_PFAFAS	Broader Management Zone	Risk Zone C
POT236	24 Aug 2016	QC99_240816	Field D	NSW_0908_PFAFAS	Broader Management Zone	Risk Zone C
POT236	27 Feb 2017	BWS236_270217	Normal	NSW_0908_PFAFAS	Broader Management Zone	Risk Zone C
POT236	03 Jun 2019	0908_BWS236_190603	Normal	NSW_0908_PFAFAS	Broader Management Zone	Risk Zone C
POT236	28 May 2020	0908_POT236_200528	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	Risk Zone C
POT236	12 May 2021	0908_POT236_210512	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	Risk Zone C
POT236	18 May 2022	0908_POT236_220518	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	Risk Zone C
POT236	16 May 2023	0908_POT236_230516	Normal	NSW_0908_PFAFASOMP_23	Broader Management Zone	Risk Zone C
POT303	28 Jun 2017	BWS303_280617	Normal	NSW_0908_PFAFAS	Broader Management Zone	-
POT303	27 May 2025	0908_POT303_250527	Normal	NSW_0908_PFAFASOMP_25	Broader Management Zone	-
POT303	27 May 2025	0908_QC219_250527	Interlab D	NSW_0908_PFAFASOMP_25	Broader Management Zone	-
POT365	30 Jan 2018	BWS365_300118	Normal	NSW_0908_PFAFAS	Broader Management Zone	Risk Zone C
POT365	26 May 2025	0908_POT365_250526	Normal	NSW_0908_PFAFASOMP_25	Broader Management Zone	Risk Zone C
POT365	16 Oct 2025	0908_POT365_251016	Normal	NSW_0908_PFAFASOMP_25	Broader Management Zone	Risk Zone C
POT382	12 Nov 2021	0908_POT382_211112	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	Risk Zone C
POT382	18 May 2022	0908_POT382_220518	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	Risk Zone C
POT382	14 Nov 2022	0908_POT382_221114	Normal	NSW_0908_PFAFASOMP	Broader Management Zone	Risk Zone C
POT382	17 May 2023	0908_POT382_230517	Normal	NSW_0908_PFAFASOMP_23	Broader Management Zone	Risk Zone C
POT382	28 Nov 2023	0908_POT382_231128	Normal	NSW_0908_PFAFASOMP_23	Broader Management Zone	Risk Zone C
POT382	23 Apr 2024	0908_POT382_240423	Normal	NSW_0908_PFAFASOMP_24	Broader Management Zone	Risk Zone C
POT382	20 Sep 2024	0908_POT382_240920	Normal	NSW_0908_PFAFASOMP_24	Broader Management Zone	Risk Zone C
POT382	16 Apr 2025	0908_POT382_250416	Normal	NSW_0908_PFAFASOMP_25	Broader Management Zone	Risk Zone C
POT382	15 Oct 2025	0908_POT382_251015	Normal	NSW_0908_PFAFASOMP_25	Broader Management Zone	Risk Zone C

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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Marine Water		1.78	1.48																														
EPC Region 1		5.035	1.666																														
EPC Region 2		1.47	1.009																														
EPC Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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[illegible]

Accation	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																		
SW0001	19 Nov 2021	0908_SW0001_211119	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	2.18	0.45	2.63	2.94	-	0.05	0.04	0.04	-	<-0.02	-	<-0.1	0.03	0.11	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05
SW0001	18 Jan 2022	0908_SW0001_220118	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.06	3.4	0.63	4	4.5	-	0.04	0.04	0.06	-	<-0.02	-	0.06	0.04	0.14	0.02	<-0.01	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.5	<-0.01	<-0.01	<-0.02	<-0.02	<-0.1	<-0.05	<-0.02	<-0.05	<-0.1	<-0.02	<-0.5
SW0001	07 Mar 2022	0908_SW0001_220307	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.02	0.91	0.23	1	1.3	-	0.01	0.02	0.02	-	<-0.02	-	<-0.02	<-0.02	0.04	0.01	<-0.01	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.5	<-0.01	<-0.01	<-0.02	<-0.02	<-0.1	<-0.05	<-0.02	<-0.05	<-0.1	<-0.02	<-0.5
SW0001	11 Apr 2022	0908_SW0001_220411	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.05	2	0.47	2.4	2.7	-	0.04	0.05	0.05	-	<-0.02	-	<-0.02	<-0.02	0.08	0.01	<-0.01	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.5	<-0.01	<-0.01	<-0.02	<-0.02	<-0.1	<-0.05	<-0.02	<-0.05	<-0.1	<-0.02	<-0.5
SW0001	18 May 2022	0908_SW0001_220518	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.03	1.65	0.37	2.02	2.25	-	0.02	0.03	0.04	-	<-0.02	-	<-0.1	0.03	0.08	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	12 Jul 2022	0908_SW0001_220712	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.02	0.69	0.15	0.85	0.86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<-0.01	<-0.02	-	-	-	-	-	-	-	-
SW0001	13 Jul 2022	0908_QC100_220713	Field_D	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	0.01	0.63	0.11	0.74	0.78	-	<-0.02	<-0.02	<-0.02	-	<-0.02	-	<-0.1	<-0.02	0.03	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	13 Jul 2022	0908_SW0001_220713	Normal	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	0.01	0.59	0.1	0.69	0.73	-	<-0.02	<-0.02	<-0.02	-	<-0.02	-	<-0.1	<-0.02	0.03	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	18 Jul 2022	0908_SW0001_220719	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.02	1.1	0.2	1.2	1.4	-	0.01	0.02	0.02	-	<-0.02	-	<-0.02	<-0.02	0.04	<-0.01	<-0.01	<-0.02	<-0.02	<-0.05	<-0.1	<-0.5	<-0.01	<-0.01	<-0.02	<-0.02	<-0.1	<-0.05	<-0.02	<-0.05	<-0.1	<-0.02	<-0.5	
SW0001	11 Aug 2022	0908_SW0001_2208111720	Normal	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	0.01	0.83	0.21	0.98	1.09	-	<-0.02	<-0.02	<-0.02	-	<-0.02	-	<-0.1	<-0.02	0.04	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	11 Aug 2022	0908_SW0001_2208111720	Normal	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	0.01	0.76	0.2	0.92	1.01	-	<-0.02	<-0.02	<-0.02	-	<-0.02	-	<-0.1	<-0.02	0.04	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	11 Aug 2022	0908_SW0001_2208111721	Normal	NSW_0908_PFASMGMT	Secondary Management Zone	Region 1	-	-	-	0.96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW0001	17 Oct 2022	0908_SW0001_221017	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.02	0.93	0.23	1.2	1.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<-0.01	<-0.02	-	-	-	-	-	-	-	-
SW0001	08 Nov 2022	0908_SW0001_221108	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.03	1.46	0.34	1.8	1.99	-	0.02	0.03	0.03	-	<-0.02	-	<-0.1	<-0.02	0.08	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	20 Jan 2023	0908_SW0001_230120	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	<-0.01	0.48	0.12	0.6	0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<-0.01	<-0.02	-	-	-	-	-	-	-	-
SW0001	21 Apr 2023	0908_SW0001_230421	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.02	1.1	0.29	1.4	1.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<-0.01	<-0.02	-	-	-	-	-	-	-	-
SW0001	08 May 2023	0908_SW0001_230508	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 1	0.04	2.16	0.41	2.57	2.8	-	<-0.02	0.03	0.04	-	<-0.02	-	<-0.1	0.03	0.09	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	06 Jul 2023	0908_SW0001_230706	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 1	0.05	2.1	0.53	2.7	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<-0.01	<-0.02	-	-	-	-	-	-	-	-
SW0001	21 Nov 2023	0908_SW0001_231121	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 1	0.02	1.16	0.24	1.4	1.54	-	0.03	<-0.02	0.02	-	<-0.02	-	<-0.1	<-0.02	0.07	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	24 Apr 2024	0908_SW0001_240424	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 1	0.04	2.5	0.49	2.99	3.32	-	0.03	0.04	0.04	-	<-0.02	-	<-0.1	0.03	0.13	0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05	
SW0001	05 Sep 2024	0908_QC101_240905	Field_D	NSW_0908_PFASMGMT_24	Secondary Management Zone	Region 1	0.03	1.48	0.31	1.79	1.95	<-0.02	<-0.02	0.02	0.03	<-0.02	<-0.02	<-0.05	<-0.1	0.02	0.06	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	05 Sep 2024	0908_QC201_240905	Interlab_D	NSW_0908_PFASMGMT_24	Secondary Management Zone	Region 1	0.02	1.2	0.33	1.5	1.7	-	0.01	0.02	0.02	-	<-0.02	-	0.02	0.02	0.06	0.01	<-0.01	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.5	<-0.01	<-0.01	<-0.02	<-0.02	<-0.1	<-0.05	<-0.02	<-0.05	<-0.1	<-0.02	<-0.5
SW0001	05 Sep 2024	0908_SW0001_240905	Normal	NSW_0908_PFASMGMT_24	Secondary Management Zone	Region 1	0.03	1.49	0.3	1.79	1.94	<-0.02	<-0.02	0.02	0.03	<-0.02	<-0.02	<-0.05	<-0.1	0.02	0.05	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	25 Sep 2024	0908_SW0001_240925	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 1	0.03	1.9	0.4	2.3	2.46	-	<-0.02	<-0.02	0.03	-	<-0.02	-	<-0.1	0.02	0.08	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	20 Nov 2024	0908_SW0001_241120	Normal	NSW_0908_PFASMGMT_24	Secondary Management Zone	Region 1	0.03	1.62	0.35	1.97	2.16	<-0.02	<-0.02	0.02	0.03	<-0.02	<-0.02	<-0.05	<-0.1	0.03	0.08	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	02 Apr 2025	0908_SW0001_250402	Normal	NSW_0908_PFASOMP_25	Secondary Management Zone	Region 1	0.02	1.34	0.26	1.6	1.72	<-0.02	<-0.02	<-0.02	0.02	<-0.02	<-0.02	<-0.05	<-0.1	0.02	0.06	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	01 Aug 2025	0908_QC104_250801	Field_D	NSW_0908_PFASMGMT_25	Secondary Management Zone	Region 1	0.01	0.5	0.15	0.65	0.69	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.02	0.03	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	01 Aug 2025	0908_QC204_250801	Interlab_D	NSW_0908_PFASMGMT_25	Secondary Management Zone	Region 1	<-0.01	0.58	0.17	0.74	0.8	-	<-0.01	0.01	0.01	-	<-0.02	-	<-0.02	<-0.02	0.03	<-0.01	<-0.01	<-0.02	<-0.02	<-0.05	<-0.1	<-0.5	<-0.01	<-0.01	<-0.02	<-0.02	<-0.1	<-0.05	<-0.02	<-0.05	<-0.1	<-0.02	<-0.5	
SW0001	01 Aug 2025	0908_SW0001_2508010900	Normal	NSW_0908_PFASMGMT_25	Secondary Management Zone	Region 1	0.01	0.54	0.15	0.69	0.73	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.02	0.03	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	01 Aug 2025	0908_SW0001_2508011100	Normal	NSW_0908_PFASMGMT_25	Secondary Management Zone	Region 1	0.01	0.57	0.15	0.72	0.76	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.02	0.03	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	01 Aug 2025	0908_SW0001_2508011300	Normal	NSW_0908_PFASMGMT_25	Secondary Management Zone	Region 1	0.01	0.61	0.15	0.76	0.81	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.1	<-0.02	0.04	<-0.02	<-0.02	<-0.02	<-0.02	<-0.02	<-0.05	<-0.05	<-0.05	<-0.05	<-0.05	<-0.02	<-0.05	<-0.02	<-0.05	<-0.05	<-0.02	<-0.05		
SW0001	01 Aug 2025	0908_SW0001_2508011500	Normal	NSW_0908_PFASMGMT_25	Secondary Management Zone	Region 1	0.01	0.58	0.16	0.74	0.79	<-0.02	<-0.02	<-0.02	<-0.02	<-0.																								

Table T9 - Historical Surface Water Analytical Results

							PFAS				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides									
							Perfluorooctanoic acid (PFDA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		
							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR							0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.01	0.05	0.01	0.05		
PFAS NEMP 2025 Recreational water quality guideline							10	2	2	2																															
PFAS NEMP 2025 Freshwater 99%							19	0.0023																																	
EPC Marine Water								1.78	1.48																																
EPC Region 1								5.035	1.666																																
EPC Region 2								1.47	1.009																																
EPC Region 3								7.743	6.773																																

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.02	0.88	0.24	1.12	1.26	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	0.06	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012220820	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.84	0.23	1.07	1.15	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012220920	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.93	0.24	1.17	1.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221020	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.85	0.22	1.07	1.13	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221120	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.9	0.23	1.13	1.19	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221220	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.94	0.21	1.15	1.21	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221320	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.89	0.21	1.1	1.16	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221420	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.93	0.21	1.14	1.2	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221520	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.99	0.22	1.21	1.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221620	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	0.99	0.22	1.21	1.27	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221720	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.07	0.22	1.29	1.37	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221820	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.02	1.06	0.22	1.28	1.34	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012221920	Normal	NSW_0908_PFASOMP	Broader Management Zone	Region 1	0.03	1.23	0.31	1.54	1.7	-	0.02	0.02	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW005	22 Dec 2020	0908_SW005_2012222020	Normal	NSW_0908_PFASOMP	Broader Management Zone																																					

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																												
PFAS NEMP 2025 Freshwater 99%	19	0.0023																														
EPC Marine Water		1.78	1.48																													
EPC Region 1		5.035	1.666																													
EPC Region 2		1.47	1.009																													
EPC Region 3		7.743	6.773																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids												PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides					
	Perfluorooctanoic acid (PFDA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDaA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Marine Water		1.78	1.48																														
EPC Region 1		5.035	1.666																														
EPC Region 2		1.47	1.009																														
EPC Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.04	3.73	0.27	4	4.23	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012211850	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	3.73	0.27	4	4.23	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW007	21 Dec 2020	0908_SW007_2012211950	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.96	0.12	2.08	2.29	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.15	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	21 Dec 2020	0908_SW007_2012212050	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	1.43	0.1	1.53	1.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.17	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	21 Dec 2020	0908_SW007_2012212150	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	1.43	0.1	1.53	1.75	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.18	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	21 Dec 2020	0908_SW007_2012212250	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.7	0.14	1.84	2.06	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.16	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	21 Dec 2020	0908_SW007_2012212350	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	2.09	0.2	2.29	2.57	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.18	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220050	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.03	2.62	0.23	2.85	3.16	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	0.03	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.16	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220150	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	2.24	0.21	2.45	2.69	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	0.03	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.11	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220250	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.9	0.16	2.06	2.23	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.03	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220350	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.65	0.12	1.77	1.83	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220450	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	1.28	0.1	1.38	1.42	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220550	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	1.22	0.1	1.32	1.36	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220650	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.01	1.43	0.13	1.56	1.61	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220750	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	1.74	0.16	1.9	2.05	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	0.03	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220850	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.02	2.37	0.23	2.6	2.78	-	<0.02	<0.02	0.02	-	<0.02	-	<0.1	0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.06	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012220950	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.03	2.74	0.26	3	3.24	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.07	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012221050	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	2.94	0.32	3.26	3.54	-	<0.02	<0.02	0.03	-	<0.02	-	<0.1	0.04	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012221150	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.04	3.37	0.36	3.73	4.08	-	<0.02	0.02	0.04	-	<0.02	-	<0.1	0.04	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012221250	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.05	3.66	0.42	4.08	4.47	-	<0.02	0.03	0.04	-	<0.02	-	<0.1	0.05	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	22 Dec 2020	0908_SW007_2012221350	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.06	4.76	0.53	5.29	5.77	-	0.02	0.03	0.05	-	<0.02	-	<0.1	0.06	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.08	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	29 Jan 2021	0908_QC103_210129	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.11	9.64	1.16	10.8	11.5	-	0.04	0.07	0.1	-	<0.02	-	<0.1	0.08	0.24	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	29 Jan 2021	0908_QC203_210129	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.094	7.2	0.94	-	-	-	0.033	0.051	0.061	<0.01	<0.01	<0.02	0.057	0.09	0.21	0.044	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SW007	29 Jan 2021	0908_SW007_210129	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.1	7.3	0.86	8.16	8.73	-	0.03	0.05	0.07	-	<0.02	-	<0.1	0.09	0.2	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	29 Jan 2021	0908_SW007_2101291400	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.13	9.76	1.35	11.1	12	-	0.05	0.08	0.14	-	<0.02	-	<0.1	0.1	0.3	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	29 Jan 2021	0908_SW007_2101291500	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.12	9.88	1.22	11.1	11.9	-	<0.02	0.07	0.12	-	<0.02	-	<0.1	0.15	0.27	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW007	29 Jan 2021	0908_SW007_2101291600	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 1	0.12	10.2	1.08	11.3	12	-	0.02	0.06	0.12	-	<0.02	-	<0.1	0.06	0.24	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02</							

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																												
PFAS NEMP 2025 Freshwater 99%	19	0.0023																														
EPC Marine Water		1.78	1.48																													
EPC Region 1		5.035	1.666																													
EPC Region 2		1.47	1.009																													
EPC Region 3		7.743	6.773																													

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Marine Water		1.78	1.48																														
EPC Region 1		5.035	1.666																														
EPC Region 2		1.47	1.009																														
EPC Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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PFAS NEMP 2025 Recreational water quality guideline

PFAS NEMP 2025 *Freshwater 99%*

EPC Marine Water

EPC Region 1

EPC Region 2

EPC Region 3

SW0024	07 Oct 2025	0908_SW0024_251007	Normal	NSW_0908_PFAOSOMP_25	Broader Management Zone	Region 2	<0.01	0.12	0.10	0.22	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	17 Nov 2014	BD03_SW001_171114	Normal	NSW_0908_PFAAS	On-base	-	0.25	17	2.2	19.2	-	-	0.16	-	-	-	<0.01	-	-	<0.01	0.34	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
SW0047	17 Nov 2014	QC101_SW_171114	Interlab D	NSW_0908_PFAAS	On-base	-	0.29	16	2.1	18.1	-	-	0.13	-	-	-	<0.01	-	-	<0.01	0.41	0.09	0.02	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			
SW0047	14 Jan 2016	BD03_SW_1412016	Normal	NSW_0908_PFAAS	On-base	-	0.9	31.6	5.16	36.76	-	-	0.249	-	-	-	<0.005	-	-	-	1.74	0.125	0.01	0.007	<0.005	<0.005	<0.005	<0.05	-	0.02	<0.01	-	0.007	<0.05	-	-	<0.05	<0.05		
SW0047	14 Sep 2016	BD03_140916	Normal	NSW_0908_PFAAS	On-base	-	0.15	17	1.3	18.3	-	-	0.1	0.13	0.17	0.046	<0.001	<0.2	<0.5	0.047	0.27	0.04	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	0.013	<0.01	-	<0.01	<0.02	<0.01	<0.2	<0.01	<0.05	<0.02
SW0047	16 Dec 2016	BD03_SW_161216	Normal	NSW_0908_PFAAS	On-base	-	0.03	2.27	0.26	2.53	2.63	-	<0.02	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	03 Feb 2017	BD03_SW_030217	Normal	NSW_0908_PFAAS	On-base	-	0.05	2.8	0.52	3.3	3.51	-	0.03	0.04	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	10 Feb 2017	BD03_SW_100217	Normal	NSW_0908_PFAAS	On-base	-	<0.05	2.16	0.91	3.07	3.29	-	<0.05	0.08	0.06	-	<0.05	-	<0.2	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	<0.05		
SW0047	17 Feb 2017	BD03_SW_17022017	Normal	NSW_0908_PFAAS	On-base	-	0.04	1.68	0.64	2.32	2.58	-	0.04	0.05	0.02	-	<0.02	-	<0.1	0.03	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	24 Feb 2017	BD03_SW_240217	Normal	NSW_0908_PFAAS	On-base	-	0.05	2.16	0.65	2.81	3.14	-	0.05	0.05	0.04	-	<0.02	-	<0.1	0.04	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	24 Feb 2017	QC409_SW_240217	Field D	NSW_0908_PFAAS	On-base	-	0.06	2.65	0.77	3.42	3.8	-	0.05	0.06	0.05	-	<0.02	-	<0.1	0.04	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	24 Feb 2017	QC508_SW_24022017	Interlab D	NSW_0908_PFAAS	On-base	-	<0.02	1.2	0.28	1.48	-	-	0.017	-	-	-	<0.02	-	<0.05	<0.02	0.053	<0.01	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	-	<0.05	<0.05	-	<0.02	-	-	-	-	-	
SW0047	03 Mar 2017	BD03_SW_030317	Normal	NSW_0908_PFAAS	On-base	-	0.03	1.65	0.28	1.93	1.99	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	10 Mar 2017	BD03_SW_100317	Normal	NSW_0908_PFAAS	On-base	-	0.06	1.78	0.79	2.57	2.89	-	0.04	0.06	0.03	-	<0.02	-	<0.1	<0.02	0.13	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	17 Mar 2017	BD03_SW_20170317	Normal	NSW_0908_PFAAS	On-base	-	0.06	3.45	1.12	4.57	4.99	-	0.04	0.06	0.05	-	<0.02	-	<0.1	0.03	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	22 Mar 2017	BD03_SW_220317	Normal	NSW_0908_PFAAS	On-base	-	0.06	1.73	0.98	2.71	3.18	-	0.07	0.08	0.04	-	<0.02	-	<0.1	0.03	0.16	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	31 Mar 2017	BD03_SW_310317	Normal	NSW_0908_PFAAS	On-base	-	0.09	4.62	1	5.62	6.22	-	0.05	0.08	0.06	-	<0.02	-	<0.1	0.06	0.22	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	07 Apr 2017	BD03_SW_070417	Normal	NSW_0908_PFAAS	On-base	-	0.12	3.59	1.74	5.33	6.18	-	0.12	0.13	0.07	-	<0.02	-	<0.1	0.11	0.24	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		
SW0047	05 May 2017	BD03_SW_050517	Normal	NSW_0908_PFAAS	On-base	-	0.08	3.28	1.53	4.81	-	-	0.11	0.17	0.1	-	<0.02	-	<0.1	<0.02	0.34	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.29	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05		
SW0047	05 May 2017	QC417_050517	Field D	NSW_0908_PFAAS	On-base	-	0.07	2.62	1.43	4.05	-	-	0.12	0.14	0.08	-	<0.02	-	<0.1	<0.02	0.29	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.23	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05			
SW0047	05 May 2017	QC_516_050517	Field D	NSW_0908_PFAAS	On-base	-	0.061	1.6	0.93	2.53	-	-	0.093	-	-	-	<0.02	-	<0.077	0.2	0.34	0.061	<0.01	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	-	0.19	<0.05	-	<0.02	-	-	-	-		
SW0047	02 Jun 2017	BD03_SW_020617	Normal	NSW_0908_PFAAS	On-base	-	0.04	1.77	1.01	2.78	3.82	-	0.09	0.1	0.06	-	<0.02	-	<0.1	0.12	0.25	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.31	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05			
SW0047	21 Jul 2017	BD03_SW_210717	Normal	NSW_0908_PFAAS	On-base	-	0.05	2.06	0.92	2.98	3.78	-	0.06	0.09	0.06	-	<0.02	-	<0.1	0.12	0.18	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.19	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05			
SW0047	12 Apr 2018	BD03_SW_13042018	Normal	NSW_0908_PFAAS	On-base	-	0.08	4.95	0.88	5.83	6.35	-	0.04	0.06	0.07	-	<0.02	-	<0.1	0.07	0.16	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
SW0047	07 Dec 2018	0908_BD03_SW_181207	Normal	NSW_0908_PFAAS	On-base	-	0.12	6.69	1.42	8.11	8.92	-	0.05	0.08	0.09	-	<0.02	-	<0.1	0.15	0.27	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
SW0047	09 Apr 2019	0908_BD03_190409	Normal	NSW_0908_PFAAS	On-base	-	0.12	9.16	1.63	10.79	-	-	0.09	0.13	0.15	-	<0.02	-	<0.1	0.08	0.35	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
SW0047	09 Apr 2019	0908_QC100_190409	Field D	NSW_0908_PFAAS	On-base	-	0.12	9.91	1.71	11.62	-	-	0.08	0.14	0.15	-	<0.02	-	<0.1	0.08	0.36	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
SW0047	14 Jun 2019	0908_BD03_SW_190614	Normal	NSW_0908_PFAAS	On-base	-	0.09	3.78	0.73	4.51	5.41	-	0.03	0.05	0.05	-	<0.02	-	<0.1	0.1	0.2	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.32	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05			
SW0047	06 Nov 2019	0908_BD03_SW_191106	Normal	NSW_0908_PFAOSOMP	On-base	-	0.08	5.12	0.99	6.11	7.01	-	0.09	0.06	0.08	-	<0.02	-	<0.1	0.10	0.28	0.06	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.15	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05			
SW0047	22 May 2020	0908_SW047_200522	Normal	NSW_0908_PFAOSOMP	On-base	-	0.04	3.79	0.68	4.47	5.13	-	0.05	0.06	0.05	-	<0.02	-	<0.1	0.08	0.16	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.18	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05			
SW0047	27 Nov 2020	0908_SW047_201127	Normal	NSW_0908_PFAOSOMP	On-base	-	0.15	20.6	1.83	22.4	23.6	-	0.06	0.08	0.16	-	<0.02	-	<0.1	0.16	0.45	0.07	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
SW0047	11 May 2021	0908_SW047_210511	Normal	NSW_0908_PFAOSOMP	On-base	-	0.08	3.23	1.46	6.69	5.43	-	0.08	0.11	0.07	-	<0.02	-	<0.1	0.08	0.27	0.05	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05			
SW0047	16 Nov 2021	0908_SW047_211116	Normal	NSW_0908_PFAOSOMP	On-base	-	0.14	9.14	1.54	10.77	11.8	-	0.08	0.10	0.09	-	<0.02	-	<0.1																					

Table T9 - Historical Surface Water Analytical Results

							PFAS			PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids							PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides														
							Perfluorooctanoic acid (PFDA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)			
							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR							0.002	0.002	0.002	2	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.02	0.01	0.05	0.005	0.01	0.05	
PFAS NEMP 2025 Recreational water quality guideline							19	0.00023																																		
PFAS NEMP 2025 Freshwater 99%								1.78	1.48																																	
EPC Marine Water								5.035	1.666																																	
EPC Region 1								1.47	1.009																																	
EPC Region 2								7.743	6.773																																	
EPC Region 3																																										

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.06	0.64	0.65	1.29	1.63	<0.02	0.04	0.04	0.06	<0.02	<0.02	<0.05	<0.1	<0.02	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW048	10 Apr 2025	0908_SW048_250410	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.06	0.64	0.65	1.29	1.63	<0.02	0.04	0.04	0.06	<0.02	<0.02	<0.05	<0.1	<0.02	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW048	11 Apr 2025	0908_SW048_250411	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.04	0.34	0.52	0.86	1.17	<0.02	0.04	0.05	0.04	<0.02	<0.02	<0.05	<0.1	0.03	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
SW048	12 Apr 2025	0908_SW048_250412	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.07	0.75	0.83	1.58	2.02	<0.02	0.04	0.06	0.10	<0.02	<0.02	<0.05	<0.1	0.02	0.12	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW048	13 Apr 2025	0908_SW048_250413	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.06	0.39	0.83	1.22	1.65	<0.02	0.05	0.07	0.06	<0.02	<0.02	<0.05	<0.1	0.03	0.13	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW048	22 Apr 2025	0908_SW048_250422	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.03	0.33	0.45	0.78	1.02	<0.02	0.03	0.04	0.03	<0.02	<0.02	<0.05	<0.1	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
SW048	29 Apr 2025	0908_SW048_250429	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.02	0.25	0.30	0.55	0.69	<0.02	0.02	0.03	0.02	<0.02	<0.02	<0.05	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
SW048	06 May 2025	0908_SW048_250506	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.04	0.49	0.41	0.90	1.08	<0.02	<0.02	0.04	0.04	<0.02	<0.02	<0.05	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
SW048	14 May 2025	0908_SW048_250514	Normal	NSW_0908_PFASMGMT_25	On-base	-	0.04	0.52	0.49	1.01	1.27	<0.02	0.03	0.05	0.04	<0.02	<0.02	<0.05	<0.1	0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
SW048	09 Oct 2025	0908_QC107_251009	Field_D	NSW_0908_PFASOMP_25	On-base	-	0.10	1.02	1.05	2.07	2.67	0.02	0.07	0.09	0.08	<0.02	<0.02	<0.05	<0.1	0.04	0.17	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05
SW048	09 Oct 2025	0908_QC207_251009	Interlab_D	NSW_0908_PFASOMP_25	On-base	-	0.09	1.1	0.82	1.9	2.5	-	0.08	0.09	0.11	-	<0.02	-	<0.02	0.04	0.09	0.04	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5		
SW048	09 Oct 2025	0908_SW048_251009	Normal	NSW_0908_PFASOMP_25	On-base	-	0.10	1.04	1.02	2.06	2.64	0.02	0.06	0.09	0.08	<0.02	<0.02	<0.05	<0.1	0.04	0.16	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	
SW055	23 Jun 2014	DD1_WATER	Normal	NSW_0908_PFAS	On-base	-	0.09	0.13	0.48	0.61	-	-	0.06	-	-	-	<0.01	-	-	0.04	0.27	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-		
SW055	25 Jun 2014	QC7_WATER	Field_D	NSW_0908_PFAS	On-base	-	0.1	0.59	0.7	1.29	-	-	0.06	-	-	-	<0.01	-	-	0.05	0.31	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	-	<0.05	-	-				
SW055	26 Jun 2014	QC6_SEDIMENT_PW	Interlab_D	NSW_0908_PFAS	On-base	-	<0.02	<0.02	0.25	0.27	-	-	0.1	-	-	-	<0.02	-	-	-	0.15	0.03	<0.02	<0.02	<0.05	<0.05	<0.05	<0.5	-	<0.1	<0.1	-	<0.02	<0.5	-	<0.5	<0.05	-	<0.5		
SW055	26 Jun 2014																																								

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															
EPC Marine Water		1.78	1.48																														
EPC Region 1		5.035	1.666																														
EPC Region 2		1.47	1.009																														
EPC Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids												PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides							
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																															
PFAS NEMP 2025 Freshwater 99%	19	0.0023																																	
EPC Marine Water		1.78	1.48																																
EPC Region 1		5.035	1.666																																
EPC Region 2		1.47	1.009																																
EPC Region 3		7.743	6.773																																

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region		0.06	1.88	0.64	2.52	2.87	<0.02	0.03	0.05	0.04	<0.02	<0.02	<0.05	<0.1	0.03	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW055	17 Aug 2025	0908_SW055_2508170300	Normal	NSW_0908_PFA5MGMT_25	On-base	-		0.06	1.88	0.64	2.52	2.87	<0.02	0.03	0.05	0.04	<0.02	<0.02	<0.05	<0.1	0.03	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW055	17 Aug 2025	0908_SW055_2508170915	Normal	NSW_0908_PFA5MGMT_25	On-base	-		0.06	1.90	0.65	2.55	2.93	<0.02	0.04	0.04	0.05	<0.02	<0.02	<0.05	<0.1	0.04	0.12	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW055	09 Oct 2025	0908_SW055_251009	Normal	NSW_0908_PFA5COMP_25	On-base	-		0.08	1.86	0.90	2.76	3.33	0.02	0.06	0.08	0.06	<0.02	<0.02	<0.05	<0.1	0.06	0.18	0.03	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	19 Jun 2014	DD2_WATER	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.08	0.02	0.52	0.54	-	0.11	-	-	-	-	<0.01	-	-	0.04	0.42	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	<0.05	<0.05	-	-
SW059	14 Jan 2016	DD2_SW_1412016	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.082	1.56	-	1.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-
SW059	14 Jan 2016	QC200_SW_140116	Interlab D	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.064	2.6	-	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-
SW059	14 Dec 2016	DD2_SW_161214	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.1	0.8	1.68	2.48	3.55	-	0.31	0.28	0.07	-	<0.02	-	<0.1	0.06	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	02 Feb 2017	DD2_SW_020217	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.03	1.61	0.66	2.27	2.59	-	0.06	0.08	0.03	-	<0.02	-	<0.1	<0.02	0.12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	09 Feb 2017	DD2_SW_090217	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		<0.05	0.44	0.12	0.56	0.56	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	
SW059	16 Feb 2017	DD2_SW_16022017	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		<0.05	0.08	0.18	0.26	4.66	-	<0.05	<0.05	<0.05	-	<0.05	-	4.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12	
SW059	02 Mar 2017	DD2_SW_020317	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.62	0.65	1.27	1.52	-	0.06	0.07	<0.02	-	<0.02	-	<0.1	<0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1030	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		<0.01	0.05	0.06	0.11	0.11	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	08 Mar 2017	DD2_AS_080317_1045	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.03	1.13	0.73	1.86	2.1	-	0.04	0.06	0.03	-	<0.02	-	<0.1	<0.02	0.08	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1100	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.03	1.01	0.62	1.63	1.84	-	0.04	0.05	0.03	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1115	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.03	0.86	0.61	1.47	1.66	-	0.04	0.04	0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1130	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.82	0.54	1.36	1.53	-	0.04	0.04	0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1145	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.95	0.51	1.46	1.59	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1200	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.67	0.34	1.01	1.1	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1215	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.01	0.71	0.32	1.03	1.11	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1230	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.8	0.42	1.22	1.34	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1245	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.85	0.46	1.31	1.45	-	0.03	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1300	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.01	0.64	0.33	0.97	1.06	-	0.02	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1315	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.01	0.6	0.31	0.91	0.99	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1330	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.01	0.64	0.33	0.97	1.06	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1345	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.78	0.43	1.21	1.35	-	0.03	0.03	0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1400	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.75	0.42	1.17	1.29	-	0.03	0.03	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1415	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.68	0.36	1.04	1.15	-	0.03	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW059	08 Mar 2017	DD2_AS_080317_1430	Normal	NSW_0908_PFA5	Secondary Management Zone	Region 3		0.02	0.62	0.33	0.95	1.04	-	0.02	0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0					

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids												PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides					
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Marine Water		1.78	1.48																														
EPC Region 1		5.035	1.666																														
EPC Region 2		1.47	1.009																														
EPC Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.0023																															
EPC Marine Water		1.78	1.48																														
EPC Region 1		5.035	1.666																														
EPC Region 2		1.47	1.009																														
EPC Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.07	1.08	1.29	2.37	3.03	-	0.09	0.12	0.07	-	<0.02	-	<0.1	0.05	0.23	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
SW059	25 Jun 2021	0908_SW059_210625	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.07	1.08	1.29	2.37	3.03	-	0.09	0.12	0.07	-	<0.02	-	<0.1	0.05	0.23	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
SW059	27 Jul 2021	0908_SW059_210727	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.05	1.1	0.92	2.02	2.58	0.03	0.08	0.09	0.04	<0.01	<0.01	-	<0.05	0.04	0.20	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SW059	30 Jul 2021	0908_SW059_210730	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.06	1.02	1.03	2.05	2.66	-	0.09	0.09	0.06	-	<0.02	-	<0.1	0.05	0.23	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	20 Aug 2021	0908_QC100_210820	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.12	1.69	1.81	3.50	4.69	-	0.17	0.21	0.12	-	<0.02	-	<0.1	0.09	0.43	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	20 Aug 2021	0908_SW059_210820	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.13	1.76	2.14	3.90	5.24	-	0.20	0.24	0.14	-	<0.02	-	<0.1	0.10	0.47	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	27 Sep 2021	0908_SW059_210927	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.06	0.88	1.07	1.95	2.58	-	0.10	0.10	0.06	-	<0.02	-	<0.1	0.04	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	11 Oct 2021	0908_SW059_211011	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.19	3.7	2.2	5.9	7.58	0.07	0.18	0.26	0.17	<0.01	<0.01	-	0.10	0.10	0.54	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
SW059	25 Oct 2021	0908_SW059_211025	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.16	2.32	1.78	4.10	5.49	-	0.18	0.22	0.14	-	<0.02	-	<0.1	0.10	0.52	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	15 Nov 2021	0908_SW059_211115	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.07	1.18	1.16	2.34	3.10	-	0.13	0.12	0.07	-	<0.02	-	<0.1	0.05	0.28	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	16 Nov 2021	0908_SW059_211116	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.09	2.2	1.1	3.3	4.22	0.04	0.09	0.15	0.11	<0.01	<0.01	-	0.07	0.06	0.27	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
SW059	18 Jan 2022	0908_SW059_220118	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.07	0.88	1.7	2.6	3.6	-	0.19	0.2	0.09	-	<0.02	-	0.03	0.07	0.35	0.04	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW059	07 Mar 2022	0908_SW059_220307	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.04	1.1	0.83	1.9	2.4	-	0.05	0.07	0.04	-	<0.02	-	0.02	0.04	0.16	0.03	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	0.02	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW059	11 Apr 2022	0908_SW059_220411	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.04	0.98	0.70	1.7	2.1	-	0.05	0.05	0.05	-	<0.02	-	<0.02	0.03	0.12	0.03	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW059	17 May 2022	0908_QC103_220517	Field_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.04	0.80	0.73	1.53	1.94	-	0.05	0.07	0.05	-	<0.02	-	<0.1	0.03	0.15	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	17 May 2022	0908_QC203_220517	Interlab_D	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.05	0.72	0.75	1.5	1.9	-	0.05	0.06	0.06	-	<0.02	-	0.03	0.03	0.13	0.03	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5
SW059	17 May 2022	0908_SW059_220517	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.04	0.76	0.74	1.50	1.92	-	0.05	0.07	0.05	-	<0.02	-	<0.1	0.03	0.15	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	19 Jul 2022	0908_SW059_220719	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.03	0.71	0.35	1.1	1.2	-	0.03	0.03	0.03	-	<0.02	-	<0.02	<0.02	0.07	0.01	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW059	17 Oct 2022	0908_SW059_221017	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.04	1.1	0.63	1.8	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-		
SW059	09 Nov 2022	0908_SW059_221109	Normal	NSW_0908_PFASOMP	Secondary Management Zone	Region 3	0.07	1.17	0.88	2.05	2.72	-	0.08	0.12	0.08	-	<0.02	-	<0.1	0.04	0.24	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	20 Jan 2023	0908_SW059_230120	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.02	0.22	0.50	0.72	0.74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-		
SW059	21 Apr 2023	0908_SW059_230421	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.06	0.83	1.7	2.5	2.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-		
SW059	16 May 2023	0908_SW059_230516	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 3	0.13	2.14	2.35	4.49	5.88	-	0.25	0.25	0.15	-	<0.02	-	<0.1	0.09	0.46	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW059	06 Jul 2023	0908_SW059_230706	Normal	NSW_0908_WQMP_21	Secondary Management Zone	Region 3	0.10	1.2	1.9	3.1	3.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-			
SW059	23 Nov 2023	0908_SW059_231123	Normal	NSW_0908_PFASOMP_23	Secondary Management Zone	Region 3	0.04	0.64	0.88	1.52	1.99	-	0.07	0.09	0.04	-	<0.02	-	<0.1	0.04	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	16 Apr 2024	0908_SW059_240416	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 3	0.06	0.91	1.59	2.50	3.52	-	0.18	0.28	0.09	-	<0.02	-	<0.1	0.04	0.27	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	23 Sep 2024	0908_QC103_240923	Field_D	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 3	0.11	1.51	1.56	3.07	4.04	-	0.13	0.18	0.11	-	<0.02	-	<0.1	0.06	0.29	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.05	<0.02	<0.05
SW059	23 Sep 2024	0908_QC203_240923	Interlab_D	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 3	0.10	1.5	1.7	3.3	4.1	-	0.15	0.16	0.13	-	<0.02	-	<0.02	0.05	0.24	0.04	<0.01	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02	<0.5	
SW059	23 Sep 2024	0908_SW059_240923	Normal	NSW_0908_PFASOMP_24	Secondary Management Zone	Region 3	0.10	1.70	1.50	3.20	4.03	-	0.10	0.12	0.07	-	<0.02	-	<0.1	0.06	0.31	0.04	<0.02	<0.02	<0.02	<														

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides								
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
PFAS NEMP 2025 Recreational water quality guideline	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.01	0.005	0.01	0.01
PFAS NEMP 2025 Freshwater 99%	10	2	2	2																													
EPC Marine Water	19	0.0023																															
EPC Region 1		1.78	1.48																														
EPC Region 2		5.035	1.666																														
EPC Region 3		1.47	1.009																														
		7.743	6.773																														

SW060	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.43	14.2	4.18	18.38	21.5	-	0.49	0.5	0.37	-	<0.02	-	<0.1	0.15	1.03	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW060	02 Feb 2017	DD3_SW_020217	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.43	14.2	4.18	18.38	21.5	-	0.49	0.5	0.37	-	<0.02	-	<0.1	0.15	1.03	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW060	02 Feb 2017	DD3_SW_020217	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	-	-	-	18.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SW060	03 Mar 2017	DD3_SW_030317	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.05	1.55	1	2.55	3.19	-	0.19	0.14	0.03	-	<0.02	-	<0.1	<0.02	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW060	09 Mar 2017	DD3_SW_090317	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.42	9.07	7.41	16.48	22.1	-	1.31	1.1	0.45	-	<0.02	-	<0.1	0.3	1.85	0.15	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW060	09 Mar 2017	DD3_SW_090317	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	-	-	-	16.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SW060	16 Mar 2017	DD3_SW_20170316	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.28	5.48	6.78	12.26	16.2	-	0.88	0.83	0.38	-	<0.02	-	<0.1	0.18	1.21	0.15	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW060	16 Mar 2017	DD3_SW_20170316	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	-	-	-	12.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SW060	23 Mar 2017	DD3_SW_23032017	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.68	11.9	14	25.9	37.8	-	2.9	2.39	0.75	-	<0.02	-	0.6	0.58	3.65	0.38	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW060	31 Mar 2017	DD3_SW_310317	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.34	6.72	6.52	13.2	18.4	-	1.15	1.15	0.4	-	<0.02	-	0.2	0.24	1.52	0.18	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	
SW060	31 Mar 2017	DD3_SW_310317	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	-	-	-	13.24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SW060	05 Apr 2017	DD3_SW_050417	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.64	9.5	11.4	20.9	31.6	-	2.9	2.7	0.82	-	<0.02	-	<0.1	0.51	2.8	0.37	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	04 May 2017	DD3_SW_040517	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	2.34	35.3	39.9	75.2	-	-	3.59	5.53	2.8	-	<0.02	-	<0.1	<0.02	7.42	0.75	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	01 Jun 2017	DD3_SW_010617	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	1.87	20	28	48	71.1	-	4.38	4.22	1.55	-	<0.02	-	0.9	1.73	7.44	1.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	20 Jul 2017	DD3_SW_200717	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.93	31.8	19.8	51.6	59.4	-	0.95	1.36	0.99	-	<0.02	-	0.5	0.43	2.26	0.39	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	12 Apr 2018	DD3_SW_12042018	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.61	12.2	10.7	22.9	30.8	-	1.65	1.6	0.77	-	<0.02	-	0.1	0.37	2.48	0.31	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	06 Dec 2018	0908_DD3_SW_181206	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	1.43	30.7	22.4	53.1	69	-	2.51	3.17	2.07	-	<0.02	-	0.3	0.87	4.86	0.65	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	13 Jun 2019	0908_DD3_SW_190613	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	0.4	4.78	7.09	11.87	19	-	1.56	1.66	0.45	-	<0.02	-	0.2	0.38	2.23	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	13 Jun 2019	0908_DD3_SW_190613	Normal	NSW_0908_PFA5	Primary Management Zone	Region 3	-	-	-	11.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SW060	05 Nov 2019	0908_DD3_SW_191105	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.64	12.5	10.4	22.9	31.5	-	1.28	1.79	0.91	-	<0.02	-	0.4	0.57	2.68	0.33	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	04 Jun 2020	0908_SW060_200604	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.88	8.48	10.8	19.3	34.0	-	2.31	3.63	1.46	-	<0.02	-	0.5	0.84	4.54	0.56	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	20 Nov 2020	0908_SW060_201120	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	1.19	26.4	16.8	43.2	54.5	-	1.10	1.76	1.94	-	<0.02	-	0.5	0.73	3.72	0.39	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	18 Dec 2020	0908_SW060_201218	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.56	13.9	10.4	24.3	33.2	-	1.88	1.95	0.85	-	<0.02	-	0.3	0.44	2.63	0.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012211403	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.50	9.76	7.92	17.7	24.9	-	1.51	1.44	0.59	-	<0.02	-	0.3	0.43	2.17	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012211503	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.36	5.83	5.70	11.5	16.8	-	1.05	1.17	0.43	-	<0.02	-	0.2	0.26	1.64	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012211603	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.37	7.23	6.95	14.2	19.8	-	1.16	1.29	0.44	-	<0.02	-	0.2	0.26	1.73	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012211703	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.40	6.55	6.87	13.4	19.4	-	1.21	1.34	0.51	-	<0.02	-	0.2	0.27	1.81	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012211803	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.44	8.35	7.57	15.9	22.2	-	1.36	1.32	0.49	-	<0.02	-	0.2	0.36	1.88	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012211903	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.49	9.66	8.07	17.7	24.3	-	1.33	1.37	0.56	-	<0.02	-	0.2	0.34	2.05	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	21 Dec 2020	0908_SW060_2012212003	Normal	NSW_0908_PFA5OMP	Primary Management Zone	Region 3	0.48	7.98	8.20	16.2	23.1	-	1.40	1.68	0.55	-	<0.02	-	0.2	0.30	2.12	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0													

Table T9 - Historical Surface Water Analytical Results

							PFAS			PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids							PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides													
							Perfluorooctanoic acid (PFDA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		
							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR							0.002	0.002	0.002	0.01	0.01		0.002	0.01	0.01	0.01	0.005	<0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.01	0.05	0.005	0.01	0.05	
PFAS NEMP 2025 Recreational water quality guideline							10	2	2	2																															
PFAS NEMP 2025 Freshwater 99%							19	0.00023																																	
EPC Marine Water								1.78	1.48																																
EPC Region 1								5.035	1.666																																
EPC Region 2								1.47	1.009																																
EPC Region 3								7.743	6.773																																

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																		
SW060	29 Jan 2021	0908_SW060_2101290947	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.49	12.2	6.83	19.0	24.8	-	0.87	1.22	0.74	-	<0.02	-	0.2	0.31	1.64	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291047	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.52	12.2	6.84	19.0	25.0	-	0.88	1.32	0.77	-	<0.02	-	0.2	0.31	1.66	0.26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291147	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.48	10.6	6.43	17.0	22.5	-	0.86	1.02	0.69	-	<0.02	-	0.2	0.28	1.75	0.22	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291247	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.53	13.1	7.16	20.3	26.6	-	0.92	1.25	0.78	-	<0.02	-	0.3	0.34	2.02	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291347	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.56	12.6	9.26	21.9	29.7	-	1.34	1.75	0.80	-	<0.02	-	0.3	0.39	2.38	0.29	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291447	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.44	8.18	6.72	14.9	21.1	-	1.13	1.01	0.58	-	<0.02	-	0.6	0.34	1.90	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	29 Jan 2021	0908_SW060_2101291547	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.36	9.16	5.68	14.8	19.5	-	0.87	0.90	0.55	-	<0.02	-	0.2	0.22	1.37	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	19 Feb 2021	0908_SW060_210219	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.95	18.7	10.4	29.1	40.2	-	1.42	1.78	1.46	-	<0.02	-	0.6	0.66	3.83	0.42	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	26 Mar 2021	0908_QC100_210326	Field_D	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.12	4.28	1.58	5.86	6.86	-	0.12	0.14	0.14	-	<0.02	-	<0.1	0.08	0.35	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	26 Mar 2021	0908_QC200_210326	Interlab_D	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.086	2.8	1.4	-	-	-	0.1	0.12	0.093	<0.01	<0.01	<0.02	0.063	0.067	0.26	0.039	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SW060	26 Mar 2021	0908_SW060_210326	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.12	4.26	1.58	5.84	6.84	-	0.11	0.14	0.14	-	<0.02	-	<0.1	0.08	0.36	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	31 Mar 2021	0908_SW060_210331	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.22	8.1	2.7	11	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-	-	
SW060	12 Apr 2021	0908_SW060_210412	Normal	NSW_0908_WQMP_21	Primary Management Zone	Region 3	0.39	11	4.5	16	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.02	-	-	-	-	-	-	-	-	-	-	
SW060	23 Apr 2021	0908_SW060_210423	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.62	12.0	8.75	20.8	26.6	-	0.64	0.98	0.64	-	<0.02	-	0.3	0.39	2.03	0.28	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05
SW060	11 May 2021	0908_SW060_210511	Normal	NSW_0908_PFASOMP	Primary Management Zone	Region 3	0.59	10.7	6.08	16.8	21.6	-	0.53																											

Table T9 - Historical Surface Water Analytical Results

							PFAS				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides									
							Perfluorooctanoic acid (PFDA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)		
							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
LOR							0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline							10	2	2	2																															
PFAS NEMP 2025 Freshwater 99%							19	0.00023																																	
EPC Marine Water								1.78	1.48																																
EPC Region 1								5.035	1.666																																
EPC Region 2								1.47	1.009																																
EPC Region 3								7.743	6.773																																

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	<0.01	0.08	0.09	0.17	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW062	07 Oct 2025	0908_SW062_251007	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Region 3	<0.01	0.08	0.09	0.17	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW079	14 Jan 2016	TC2_SW_1412016	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	0.008	0.11	-	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	-	-	-	-	-	-	-	-	-	-	-	
SW079	14 Dec 2016	TC2_SW_161214	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	0.03	0.52	0.88	1.4	1.78	-	0.11	0.1	0.05	-	<0.02	-	<0.1	<0.02	0.05	0.04	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12		
SW079	02 Feb 2017	TC2_SW_020217	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.05	1.34	0.35	1.69	1.69	-	<0.1	<0.1	<0.1	-	<0.10	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	
SW079	09 Feb 2017	TC2_SW_090217	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.05	0.4	0.78	1.18	1.39	-	0.1	0.06	<0.05	-	<0.05	-	<0.2	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12			
SW079	16 Feb 2017	TC2_SW_16022017	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.05	0.22	0.38	0.6	1.07	-	<0.05	<0.05	<0.05	-	<0.05	-	0.4	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12			
SW079	24 Feb 2017	TC2_SW_240217	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.05	0.26	0.36	0.62	0.96	-	0.1	0.08	<0.05	-	<0.05	-	<0.2	0.06	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12			
SW079	03 Mar 2017	TC2_SW_030317	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.05	0.44	0.32	0.76	0.82	-	0.06	<0.05	<0.05	-	<0.05	-	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.05	<0.05	<0.05	<0.12	<0.05	<0.12	<0.05	<0.12				
SW079	09 Mar 2017	TC2_SW_090317	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.01	0.12	0.06	0.18	0.18	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	16 Mar 2017	TC2_SW_20170316	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.01	0.06	0.04	0.1	0.1	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05			
SW079	23 Mar 2017	TC2_SW_23032017	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.01	0.17	0.49	0.66	0.83	-	0.06	0.06	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	30 Mar 2017	TC2_SW_300317	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.01	0.21	0.52	0.73	0.93	-	0.06	0.07	<0.02	-	<0.02	-	<0.1	<0.02	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	05 Apr 2017	TC2_SW_050417	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	0.02	0.15	0.65	0.8	0.97	-	0.05	0.05	<0.02	-	<0.02	-	<0.1	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	04 May 2017	TC2_SW_040517	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.01	0.18	0.53	0.71	-	-	0.04	0.05	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.02	<0.05		
SW079	01 Jun 2017	TC2_SW_010617	Normal	NSW_0908_PFAS	Broader Management Zone	Region 3	<0.01	0.24	0.61	0.85	0.93	-	0.03	0.05	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02																

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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[illegible]

Table T9 - Historical Surface Water Analytical Results

	PFAS					PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids								PFAS - (n:2) Fluorotelomer				PFAS - Perfluoroalkyl Sulfonamides									
	Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPPs)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronananesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoDA)	Perfluorotridecanoic acid (PFTriDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)
LOR	0.002	0.002	0.002	0.01	0.01	0.01	0.002	0.01	0.01	0.01	0.005	0.02	0.02	0.01	0.002	0.002	0.002	0.002	0.005	0.005	0.005	0.01	0.01	0.005	0.01	0.01	0.002	0.02	0.01	0.05	0.005	0.01	0.05
PFAS NEMP 2025 Recreational water quality guideline	10	2	2	2																													
PFAS NEMP 2025 Freshwater 99%	19	0.00023																															
EPC Marine Water		1.78	1.48																														
EPC Region 1		5.035	1.666																														
EPC Region 2		1.47	1.009																														
EPC Region 3		7.743	6.773																														

Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	Region	0.05	0.88	0.70	1.58	2.05	-	0.06	0.08	0.05	-	<0.02	-	<0.1	0.04	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	20 Aug 2021	0908_SW259_210820	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine	0.05	0.88	0.70	1.58	2.05	-	0.06	0.08	0.05	-	<0.02	-	<0.1	0.04	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	27 Sep 2021	0908_SW259_210927	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine	0.05	1.32	0.78	2.10	2.71	-	0.09	0.10	0.05	-	<0.02	-	<0.1	0.04	0.24	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	25 Oct 2021	0908_SW259_211025	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine	0.08	1.32	1.00	2.32	3.08	-	0.10	0.12	0.07	-	<0.02	-	<0.1	0.06	0.29	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	26 Nov 2021	0908_SW259_211126	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine	0.03	0.66	0.53	1.19	1.62	-	0.08	0.06	0.03	-	<0.02	-	<0.1	0.04	0.17	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	27 May 2022	0908_SW259_220527	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine	0.04	0.85	0.43	1.28	1.54	-	0.03	0.04	0.03	-	<0.02	-	<0.1	0.02	0.10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW259	15 Nov 2022	0908_SW259_221115	Normal	NSW_0908_PFASOMP	Broader Management Zone	Marine	0.06	1.20	0.78	1.98	2.47	-	0.06	0.08	0.05	-	<0.02	-	<0.1	0.04	0.17	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	16 May 2023	0908_SW259_230516	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Marine	0.04	0.82	0.87	1.69	2.12	-	0.08	0.09	0.05	-	<0.02	-	<0.1	0.03	0.14	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW259	27 Nov 2023	0908_SW259_231127	Normal	NSW_0908_PFASOMP_23	Broader Management Zone	Marine	<0.01	0.04	0.03	0.07	0.07	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	23 Apr 2024	0908_SW259_240423	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Marine	0.02	0.39	0.49	0.88	1.17	-	0.06	0.07	0.03	-	<0.02	-	<0.1	<0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW259	20 Sep 2024	0908_SW259_240920	Normal	NSW_0908_PFASOMP_24	Broader Management Zone	Marine	0.06	1.04	0.64	1.68	2.20	-	0.06	0.10	0.07	-	<0.02	-	<0.1	0.04	0.15	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	17 Apr 2025	0908_SW259_250417	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Marine	0.06	0.95	0.96	1.91	2.46	0.03	0.08	0.09	0.07	<0.02	<0.02	<0.05	<0.1	0.04	0.16	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW259	13 Oct 2025	0908_SW259_251013	Normal	NSW_0908_PFASOMP_25	Broader Management Zone	Marine	0.06	1.29	0.78	2.07	2.51	<0.02	0.06	0.07	0.06	<0.02	<0.02	<0.05	<0.1	0.02	0.15	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	16 Dec 2020	0908_SW333_201216	Normal	NSW_0908_PFASMGMT	Primary Management Zone	Region 3	0.31	1.49	4.76	6.25	10.9	-	0.78	0.99	0.32	-	<0.02	-	0.2	0.30	1.60	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	22 Apr 2024	0908_SW333_240422	Normal	NSW_0908_PFASOMP_24	Primary Management Zone	Region 3	0.04	0.37	1.10	1.47	2.17	-	0.12	0.18	0.06	-	<0.02	-	<0.1	0.03	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	19 Sep 2024	0908_SW333_240919	Normal	NSW_0908_PFASOMP_24	Primary Management Zone	Region 3	0.07	0.81	0.94	1.75	2.94	-	0.08	0.12	0.09	-	<0.02	-	<0.1	0.04	0.24	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	0.49	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	19 Mar 2025	0908_SW333_250319	Normal	NSW_0908_PFASMGMT_25	Primary Management Zone	Region 3	0.10	0.68	1.88	2.56	3.65	0.05	0.16	0.15	0.11	<0.02	<0.02	<0.05	<0.1	0.08	0.38	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	16 Apr 2025	0908_SW333_250416	Normal	NSW_0908_PFASOMP_25	Primary Management Zone	Region 3	0.13	1.56	2.42	3.98	5.28	0.06	0.17	0.21	0.16	<0.02	<0.02	<0.05	<0.1	0.08	0.42	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	14 May 2025	0908_SW333_250514	Normal	NSW_0908_PFASMGMT_25	Primary Management Zone	Region 3	0.06	1.12	0.86	1.98	2.39	<0.02	0.05	0.07	0.06	<0.02	<0.02	<0.05	<0.1	0.03	0.12	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW333	13 Oct 2025	0908_SW333_251013	Normal	NSW_0908_PFASOMP_25	Primary Management Zone	Region 3	0.04	0.67	0.57	1.24	1.52	<0.02	0.04	0.05	0.04	<0.02	<0.02	<0.05	<0.1	<0.02	0.11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW582	23 Apr 2021	0908_SW582_210423	Normal	NSW_0908_PFASMGMT	On-base	-	0.13	4.75	1.67	6.42	7.36	-	0.05	0.11	0.14	-	<0.02	-	<0.1	0.08	0.37	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW582	08 Jul 2021	0908_QC100_210708	Field_D	NSW_0908_PFASMGMT	On-base	-	0.08	4.15	0.90	5.05	5.61	-	0.05	0.07	0.08	-	<0.02	-	<0.1	0.06	0.20	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW582	08 Jul 2021	0908_QC200_210708	Interlab_D	NSW_0908_PFASMGMT	On-base	-	0.07	4.2	0.99	5.1	5.7	-	0.05	0.06	0.1	-	<0.02	-	0.05	0.05	0.15	0.02	<0.01	<0.02	<0.02	<0.02	<0.05	<0.1	<0.5	<0.01	<0.01	<0.02	<0.02	<0.1	<0.05	<0.02	<0.05	<0.1	<0.02
SW582	08 Jul 2021	0908_SW582_210708	Normal	NSW_0908_PFASMGMT	On-base	-	0.08	5.09	0.94	6.03	6.61	-	0.05	0.08	0.08	-	<0.02	-	<0.1	0.06	0.23	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW582	14 Sep 2021	0908_SW582_210914	Normal	NSW_0908_PFASMGMT	On-base	-	<0.01	0.08	<0.02	0.08	0.08	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW582	13 Jul 2022	0908_SW582_220713	Normal	NSW_0908_PFASMGMT	On-base	-	0.09	7.08	0.86	8.34	8.87	-	0.05	0.06	0.07	-	<0.02	-	<0.1	0.06	0.18	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW582	12 Aug 2022	0908_SW582_220812	Normal	NSW_0908_PFASMGMT	On-base	-	0.01	0.43	0.16	0.59	0.66	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.1	<0.02	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW582	24 Apr 2024	0908_SW582_240424	Normal	NSW_0908_PFASOMP_24	On-base	-	0.06	3.78	0.64	4.42	4.80	-	0.03	0.05	0.05	-	<0.02	-	<0.1	0.03	0.11	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05
SW582	03 Sep 2024	0908_SW582_240903	Normal	NSW_0908_PFASMGMT_24	On-base	-	0.08	4.69	0.76	5.45	5.96	<0.02	0.05	0.06	0.08	0.04	<0.02	<0.05	<0.1	0.04	0.14	0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02	<0.05	<0.02	<0.05	<0.05	<0.02	<0.05	
SW582	25 Sep 2024	0908_SW582_240925	Normal	NSW_0908_PFASOMP_24	On-base	-	0.08	4.04	0.79	4.83	5.32	-	0.04	0.05	0.09	-	<0.02	-	<0.1	0.04	0.13	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	&							

Table T10 - Historical Sediment Analytical Results

						PFAS				PFAS - Perfluoroalkyl Sulfonic Acids						PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides											
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluorohexane sulfonic acid (PFHpS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluorohexanoic acid (PFHxA)	Perfluorooctanoic acid (PFPA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUDA)	Perfluorododecanoic acid (PFDDA)	Perfluorotridecanoic acid (PFTDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-methyl perfluorooctane sulfonamide (MeFOSA)	N-methyl perfluorooctane sulfonamidodecic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamidodecane sulfonamide (MeFOSSE)	N-ethyl perfluorooctane sulfonamide (EtFOSA)	N-ethyl perfluorooctane sulfonamidodecic acid (EtFOSAA)	N-ethyl perfluorooctane sulfonamidodecane sulfonamide (EtFOSSE)		
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0005	0.0005	0.0005	0.0005
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.005	0.17	<0.005	0.17	-	-	<0.005	-	-	-	<0.005	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
SD001	18 Jun 2014	MD1 SEDIMENT	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.005	0.0015	<0.005	0.0015	-	-	<0.005	-	-	-	<0.005	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
SD001	13 Jan 2016	MD1 SD 13012016	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0005	0.0015	<0.0005	0.0015	-	-	<0.0005	-	-	-	<0.0005	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD001	14 Dec 2016	MD1 SED 20161214	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0002	0.0774	0.0143	0.0917	0.103	-	0.0013	0.0015	0.002	-	<0.0002	-	<0.001	<0.0002	0.002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD001	14 Dec 2016	QC601 20161214	Field D	NSW 0908 PFAS	Secondary Management Zone	<0.0002	0.096	0.0213	0.117	0.133	-	0.0015	0.0022	0.0019	-	<0.0002	-	<0.001	<0.0002	0.0049	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD001	14 Dec 2016	QC601 20161214	Field D	NSW 0908 PFAS	Secondary Management Zone	-	-	-	0.1173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD001	14 Dec 2016	QC701 20161214	Interlab D	NSW 0908 PFAS	Secondary Management Zone	<0.0031	0.076	0.0065	0.0825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	-	-	-	-	-	-	-		
SD001	12 Apr 2018	MD1 SED 12042018	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0002	0.0022	0.0002	0.0024	0.0024	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD001	06 Dec 2018	0908 MD1 SD 181206	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0002	0.146	0.0096	0.1556	0.184	-	0.0037	0.0012	<0.0002	-	<0.0002	-	0.0015	<0.0005	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0011	<0.0002	<0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD001	06 Dec 2018	0908 MD1 SD 181206	Normal	NSW 0908 PFAS	Secondary Management Zone	-	-	-	0.156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SD001	14 Jun 2019	0908 MD1 SD 190614	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0014	0.13	0.0144	0.144	0.165	-	0.0009	0.0011	0.0029	-	<0.0005	-	<0.001	0.0012	0.0029	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	0.0016	0.0017	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	14 Jun 2019	0908 MD1 SD 190614	Normal	NSW 0908 PFAS	Secondary Management Zone	-	-	-	0.1444	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
SD001	05 Nov 2019	0908 MD1 SD 191105	Normal	NSW 0908 PFASOMP	Secondary Management Zone	0.0006	0.0974	0.0086	0.106	0.108	-	<0.0002	<0.0002	0.0009	-	<0.0002	-	<0.001	<0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD001	02 Jun 2020	0908 SD001 200602	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0010	0.0239	0.0018	0.0257	0.0257	-	<0.0010	<0.0010	<0.0010	-	<0.0010	-	<0.001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
SD001	20 Nov 2020	0908 QC103 201120	Normal	NSW 0908 PFASOMP	Secondary Management Zone	0.0004	0.0401	0.0058	0.0459	0.0478	-	0.0002	0.0003	0.0004	-	<0.0003	-	0.0003	<0.0003	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	20 Nov 2020	0908 QC205 201120	Interlab D	NSW 0908 PFASOMP	Secondary Management Zone	<0.001	0.044	0.014	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			
SD001	20 Nov 2020	0908 SD001 201120	Normal	NSW 0908 PFASOMP	Secondary Management Zone	0.0004	0.0393	0.0057	0.0450	0.0471	-	0.0003	0.0003	0.0004	-	<0.0003	-	<0.001	<0.0003	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	11 May 2021	0908 SD001 210511	Normal	NSW 0908 PFASOMP	Secondary Management Zone	0.0004	0.0787	0.0076	0.0863	0.0916	-	0.0003	0.0005	0.0019	-	<0.0002	-	<0.001	<0.0002	0.0005	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0003	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	19 Nov 2021	0908 QC115 211119	Field D	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0191	0.0023	0.0214	0.0214	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	19 Nov 2021	0908 QC215 211119	Interlab D	NSW 0908 PFASOMP	Secondary Management Zone	<0.0001	0.011	0.0007	0.012	0.013	-	<0.0001	<0.0001	0.0001	-	0.0004	-	<0.0002	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
SD001	19 Nov 2021	0908 SD001 211119	Normal	NSW 0908 PFASOMP	Secondary Management Zone	0.0003	0.0207	0.0031	0.0238	0.0260	-	<0.0002	<0.0002	0.0003	-	<0.0002	-	<0.001	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	18 May 2022	0908 SD001 220518	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0014	0.0002	0.0016	0.0016	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	08 Nov 2022	0908 SD001 221108	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0936	0.0082	0.102	0.107	-	0.0006	0.0006	<0.0002	-	<0.0002	-	<0.001	<0.0002	0.0012	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	0.0012	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	08 May 2023	0908 SD001 230508	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	0.0010	0.142	0.0073	0.149	0.154	-	<0.0002	<0.0002	0.0017	-	<0.0002	-	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	21 Nov 2023	0908 SD001 231121	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	0.0007	0.143	0.0093	0.152	0.157	-	0.0006	0.0006	0.0003	-	0.0005	-	<0.001	0.0007	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		
SD001	24 Apr 2024	0908 SD001 24042																																							

Table T10 - Historical Sediment Analytical Results

						PFAS				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides										
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropane sulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononane sulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUNDA)	Perfluorododecanoic acid (PFDDoA)	Perfluorotridecanoic acid (PFTrDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamide acid (MeFOsAA)	N-methyl perfluorooctane sulfonamide (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOsA)	N-Ethyl perfluorooctane sulfonamide acid (EFOsAA)	N-Ethyl perfluorooctane sulfonamide (EFOSE)				
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
LOR						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0002	0.0005	0.0002	0.0002	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0002	0.0005	0.0002	0.0005	0.0002	0.0005	0.0002	0.0005
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.0002	0.0030	<0.0002	0.0030	0.0030	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	0.0007	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0007	02 Apr 2025	0908 SD007 250402	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	<0.0002	0.0030	<0.0002	0.0030	0.0030	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	0.0007	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0007	07 Oct 2025	0908 SD007 251007	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	<0.0002	0.0299	0.0016	0.0315	0.0333	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	0.0007	-	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
S0009	28 Jan 2016	MD8 SD 28012016	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0005	<0.0005	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	
S0009	14 Dec 2016	MD8 SED 20161214	Normal	NSW 0908 PFAS	Secondary Management Zone	0.0004	0.0868	0.0116	0.0984	0.103	-	0.0006	0.0007	0.0021	-	-	-	<0.001	<0.0002	0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	01 May 2018	MD8 SED 01052018	Normal	NSW 0908 PFAS	Secondary Management Zone	0.0003	0.0702	0.0105	0.0807	0.0867	-	<0.0002	0.0003	0.0009	-	0.0024	-	<0.001	<0.0002	0.0003	<0.0002	<0.0002	0.0003	0.0003	0.0003	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
S0009	07 Dec 2018	0908 MD8 SD 181207	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0002	<0.0002	0.0006	0.0006	0.001	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	07 Dec 2018	0908 MD8 SD 181207	Normal	NSW 0908 PFAS	Secondary Management Zone	-	-	-	0.0008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S0009	13 Jun 2019	0908 MD8 SD 190613	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0002	0.0016	0.0002	0.0018	0.0018	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	06 Nov 2019	0908 MD8 SD 191106	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0057	0.0005	0.0062	0.0062	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	24 Jun 2020	0908 SD009 200624	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0051	0.0003	0.0054	0.0054	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	26 Nov 2020	0908 SD009 201126	Normal	NSW 0908 PFASOMP	Secondary Management Zone	0.0002	0.0556	0.0030	0.0586	0.0598	-	<0.0002	<0.0002	0.0005	-	<0.0002	-	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
S0009	11 May 2021	0908 SD009 210511	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0247	0.0012	0.0259	0.0259	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	17 Nov 2021	0908 SD009 211117	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0171	0.0009	0.0188	0.0188	-	<0.0002	<0.0002	<0.0002	-	0.0002	-	<0.001	<0.0002	0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	17 May 2022	0908 QC105 220517	Field D	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0194	0.0016	0.0210	0.0226	-	<0.0002	<0.0002	<0.0002	-	0.0003	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0013	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0009	17 May 2022	0908 QC205 220517	Interlab D	NSW 0908 PFASOMP	Secondary Management Zone	0.0001	0.035	0.0013	0.036	0.039	-	<0.0001	<0.0001	0.0003	-	0.001	-	<0.0002	<0.0002	<0.0001																					

Table T10 - Historical Sediment Analytical Results

						PFAS				PFAS - Perfluoroalkyl Sulfonic Acids							PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n-2) Fluorotelomer Sulfonic					PFAS - Perfluoroalkyl Sulfonamides											
						Perfluorooctanoic acid (FOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluoroundecanoic acid (PFHDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUdA)	Perfluorododecanoic acid (PFDDA)	Perfluorotridecanoic acid (PFTDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidodecane acid (MeFOsAA)	N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (ETFOsAA)	N-Ethyl perfluorooctane sulfonamidodecane acid (ETFOsAA)	N-Ethyl perfluorooctane sulfonamidoethanol (ETFOSE)					
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
LOR						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0005	0.0002	0.0002	0.0002	0.0005	0.0002	0.0002	0.0005
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.0002	0.0123	0.0008	0.0131	0.0131	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD019	28 Nov 2023	0908 SD019 231128	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	<0.0002	0.0123	0.0008	0.0131	0.0131	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD019	22 Apr 2024	0908 SD019 240422	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	<0.0002	0.0053	<0.0002	0.0053	0.0053	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD019	20 Sep 2024	0908 SD019 240920	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	<0.0002	0.0056	0.0008	0.0064	0.0074	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	0.0010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD019	14 Apr 2025	0908 SD019 250414	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	0.0005	0.0216	0.0016	0.0232	0.0242	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0003	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005
SD019	14 Oct 2025	0908 SD019 251014	Normal	NSW 0908 PFASOMP 25	Secondary Management Zone	0.0006	0.0333	0.0014	0.0347	0.0364	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0008	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005
SD023	06 Dec 2018	0908 TC6A SD 181206	Normal	NSW 0908 PFAS	Secondary Management Zone	<0.0002	0.0012	<0.0002	0.0012	0.0012	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	06 Dec 2018	0908 TC6A SD 181206	Normal	NSW 0908 PFAS	Secondary Management Zone	-	-	-	0.0014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SD023	05 Nov 2019	0908 TC6A SD 191105	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0059	0.0006	0.0065	0.0065	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	04 Jun 2020	0908 SD023 200604	Normal	NSW 0908 PFASOMP	Secondary Management Zone	0.0002	0.0101	0.0013	0.0114	0.0116	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	20 Nov 2020	0908 SD023 201120	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0040	0.0003	0.0043	0.0043	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	11 May 2021	0908 SD023 210511	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0163	0.0014	0.0177	0.0179	-	<0.0002	<0.0002	0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	17 Nov 2021	0908 QC113 211117	Field_D	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0010	<0.0002	0.0010	0.0010	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	17 Nov 2021	0908 SD023 211117	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0020	<0.0002	0.0020	0.0020	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	17 May 2022	0908 SD023 220512	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0008	<0.0002	0.0008	0.0008	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	08 Nov 2022	0908 SD023 221108	Normal	NSW 0908 PFASOMP	Secondary Management Zone	<0.0002	0.0186	0.0009	0.0195	0.0195	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	09 May 2023	0908 SD023 230509	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	<0.0002	0.0192	0.0011	0.0203	0.0206	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	20 Nov 2023	0908 SD023 231120	Normal	NSW 0908 PFASOMP 23	Secondary Management Zone	<0.0002	0.0055	0.0004	0.0059	0.0059	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	16 Apr 2024	0908 QC108 240416	Field_D	NSW 0908 PFASOMP 24	Secondary Management Zone	<0.0002	0.0249	0.0017	0.0266	0.0268	-	<0.0002	<0.0002	0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	16 Apr 2024	0908 QC208 240416	Interlab_D	NSW 0908 PFASOMP 24	Secondary Management Zone	<0.0004	0.025	0.0014	0.027	0.027	-	<0.0004	<0.0004	<0.0004	-	<0.0008	-	<0.0008	<0.0008	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	
SD023	16 Apr 2024	0908 SD023 240416	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	<0.0002	0.0269	0.0021	0.0290	0.0290	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD023	27 Sep 2024	0908 SD023 240927	Normal	NSW 0908 PFASOMP 24	Secondary Management Zone	<0.0002	0.0013	<0.0002	0.0013	0.0013	-	<0.0002	<0.0002	<0.0002	-	<0.0002																											

Table T10 - Historical Sediment Analytical Results

[illegible]

Table T10 - Historical Sediment Analytical Results

						PFAS				PFAS - Perfluoroalkyl Sulfonic Acids										PFAS - Perfluoroalkyl Carboxylic Acids										PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides					
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropane sulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorononane sulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorodecanecarboxylic acid (PFHxDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUNDA)	Perfluorododecanoic acid (PFDDoA)	Perfluorotridecanoic acid (PFTiDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	N-methyl perfluorooctane sulfonamide (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EFOSAA)	N-Ethyl perfluorooctane sulfonamidoethanol (EFEOSE)		
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR						<0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0005	0.0002	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0002	0.0002	0.0005	0.0002	0.0005	
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone	<0.0005	0.0109	-	0.0109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	-	-	-	-	-	-	-	-	<0.0005	
S0079	14 Jan 2016	TC2 SD 14012016	Normal	NSW 0908 PFAS	Broader Management Zone	<0.0002	0.0008	<0.0002	0.0008	0.0008	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	14 Dec 2016	TC2 SED 161214	Normal	NSW 0908 PFAS	Broader Management Zone	<0.0002	0.0071	0.0011	0.0082	0.0093	-	-	<0.0002	<0.0002	0.0011	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	12 Apr 2018	TC2 SED 12042018	Normal	NSW 0908 PFAS	Broader Management Zone	<0.0002	0.0011	<0.0002	0.0011	0.0013	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	06 Dec 2018	0908 TC2 SD 181206	Normal	NSW 0908 PFAS	Broader Management Zone	-	-	-	0.0013	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S0079	13 Jun 2019	0908 TC2 SD 190613	Normal	NSW 0908 PFAS	Broader Management Zone	<0.0002	0.0063	0.0007	0.007	0.007	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	05 Nov 2019	0908 TC2 SD 191105	Normal	NSW 0908 PFASOMP	Broader Management Zone	<0.0002	0.0017	0.0004	0.0021	0.0021	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	02 Jun 2020	0908 S0079 200602	Normal	NSW 0908 PFASOMP	Broader Management Zone	0.0003	0.0597	0.0040	0.0637	0.0652	-	-	0.0002	0.0002	0.0006	-	<0.0002	<0.001	<0.0002	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	26 Nov 2020	0908 S0079 201126	Normal	NSW 0908 PFASOMP	Broader Management Zone	<0.0002	0.0271	0.0056	0.0327	0.0338	-	-	0.0003	0.0003	0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	11 May 2021	0908 S0079 210511	Normal	NSW 0908 PFASOMP	Broader Management Zone	<0.0002	0.0079	0.0030	0.0109	0.0114	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	12 Nov 2021	0908 S0079 211121	Normal	NSW 0908 PFASOMP	Broader Management Zone	<0.0002	0.0162	0.0018	0.0180	0.0182	-	-	<0.0002	<0.0002	0.0002	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	16 May 2022	0908 S0079 220516	Normal	NSW 0908 PFASOMP	Broader Management Zone	<0.0002	0.0038	0.0006	0.0044	0.0044	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	07 Nov 2022	0908 S0079 221107	Normal	NSW 0908 PFASOMP	Broader Management Zone	<0.0002	0.0483	0.0070	0.0553	0.0553	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	09 May 2023	0908 S0079 230509	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	<0.0002	0.0363	0.0034	0.0397	0.0405	-	-	<0.0002	0.0003	0.0005	-	<0.0002	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	21 Nov 2023	0908 QC104 231121	Field D	NSW 0908 PFAS	Broader Management Zone	<0.0002	0.0008	<0.0002	0.0008	0.0008	-	-	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	21 Nov 2023	0908 QC204 231121	Interlab D	NSW 0908 PFASOMP 23	Broader Management Zone	<0.0001	0.0008	<0.0001	0.0008	0.0008	-	-	<0.0001	<0.0001	<0.0001	-	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
S0079	21 Nov 2023	0908 S0079 231121	Normal	NSW 0908 PFASOMP 23	Broader Management Zone	<0.0002	0.0005	<0.0002	0.0005	0.0005	-	-	&																										

Table T10 - Historical Sediment Analytical Results

						PFAS					PFAS - Perfluoroalkyl Sulfonic Acids					PFAS - Perfluoroalkyl Carboxylic Acids															PFAS - (n:2) Fluorotelomer Sulfonic				PFAS - Perfluoroalkyl Sulfonamides						
						Perfluorooctanoic acid (PFOA)	Perfluorooctane sulfonic acid (PFOS)	Perfluorohexane sulfonic acid (PFHxS)	Sum of PFHxS and PFOS	Sum of PFAS	Perfluoropropanesulfonic acid (PFPrS)	Perfluorobutane sulfonic acid (PFBS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoronanesulfonic acid (PFNS)	Perfluorodecane sulfonic acid (PFDS)	Perfluorohexadecanoic acid (PFHDA)	Perfluorobutanoic acid (PFBA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanoic acid (PFHpA)	Perfluoroheptanoic acid (PFHpA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluoroundecanoic acid (PFUnDA)	Perfluorododecanoic acid (PFDDoA)	Perfluorotridecanoic acid (PFTiDA)	Perfluorotetradecanoic acid (PFTeDA)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	8:2 Fluorotelomer sulfonic acid (8:2 FTS)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	Perfluorooctane sulfonamide (FOSA)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	N-Methyl perfluorooctane sulfonamide acid (MeFOsAA)	N-methyl perfluorooctane sulfonamide (MeFOSE)	N-Ethyl perfluorooctane sulfonamide (EFOSA)	N-Ethyl perfluorooctane sulfonamide acid (EFOsAA)	N-Ethyl perfluorooctane sulfonamide (EFOSE)			
						mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
LOR						0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0002	0.0005	0.0002	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.0002	0.0002	0.0002	0.0005	0.0001	0.0001	0.0002	0.0002	0.0002	0.0005	0.0002	0.0005	0.0002	0.0005	0.0002	0.0005
Location	Date	Field ID	Sample Type	Project ID	On-base/Management Zone																																				
SD254	13 Nov 2020	0908 SD254 201113	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0044	0.0370	0.0032	0.0402	0.0482	-	<0.0002	<0.0002	0.0006	-	<0.0002	-	<0.001	0.0004	0.0015	0.0009	0.0002	<0.0002	<0.0002	<0.0001	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD254	10 May 2021	0908 SD254 210510	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0037	0.0284	0.0031	0.0315	0.0385	-	<0.0002	0.0002	0.0004	-	<0.0002	-	<0.001	0.0005	0.0013	0.0006	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD254	26 Nov 2021	0908 SD254 211126	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0015	0.0416	0.0041	0.0457	0.0494	-	<0.0002	<0.0002	0.0006	-	0.0004	-	<0.001	<0.0002	0.0006	0.0003	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD254	27 May 2022	0908 SD254 220527	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0011	0.0276	0.0030	0.0306	0.0339	-	<0.0002	<0.0002	0.0003	-	0.0006	-	<0.001	<0.0002	0.0005	<0.0002	<0.0002	0.0008	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD254	15 Nov 2022	0908 SD254 221115	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0005	0.0378	0.0023	0.0401	0.0423	-	<0.0002	<0.0002	0.0003	-	0.0012	-	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	
SD254	16 May 2023	0908 SD254 230516	Normal	NSW 0908 PFASOMP 23	Other: Fullerton Cove (tidal gate outlet)	0.0007	0.0321	0.0016	0.0337	0.0346	-	<0.0002	<0.0002	0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD254	27 Nov 2023	0908 SD254 231127	Normal	NSW 0908 PFASOMP 23	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0150	0.0008	0.0158	0.0158	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD254	23 Apr 2024	0908 SD254 240423	Normal	NSW 0908 PFASOMP 24	Other: Fullerton Cove (tidal gate outlet)	0.0005	0.0229	0.0018	0.0247	0.0258	-	<0.0002	<0.0002	0.0002	-	0.0004	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD254	20 Sep 2024	0908 SD254 240920	Normal	NSW 0908 PFASOMP 24	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0078	<0.0002	0.0078	0.0078	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD254	17 Apr 2025	0908 SD254 250417	Normal	NSW 0908 PFASOMP 25	Other: Fullerton Cove (tidal gate outlet)	0.0007	0.0218	0.0013	0.0231	0.0238	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD254	13 Oct 2025	0908 SD254 251013	Normal	NSW 0908 PFASOMP 25	Other: Fullerton Cove (tidal gate outlet)	0.0004	0.0454	0.0014	0.0468	0.0475	<0.0005	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD255	07 Dec 2018	0908 FC1B SD 181207	Normal	NSW 0908 PFAS	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0137	0.0003	0.014	0.0145	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	0.0003	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD255	14 Jun 2019	0908 FC1B SD 190614	Normal	NSW 0908 PFAS	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0024	0.0004	0.0028	0.0028	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD255	08 Nov 2019	0908 FC1B SD 191108	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0004	0.0075	0.0020	0.0095	0.0103	-	<0.0002	0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD255	12 Jun 2020	0908 SD255 200612	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	<0.0002	0.0116	0.0011	0.0127	0.0127	-	<0.0002	<0.0002	<0.0002	-	<0.0002	-	<0.001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005	<0.0002	<0.0005		
SD255	13 Nov 2020	0908 SD255 201113	Normal	NSW 0908 PFASOMP	Other: Fullerton Cove (tidal gate outlet)	0.0008	0.0094	0.0026	0.0120	0.0134	-	<0.0002	<0.0002	0.0003	-	0.0003	-	<0.001	<0.																						

Appendix C

Calibration Certificates

Certificate of Service and Calibration

Interface Meter

Heron H.Oil

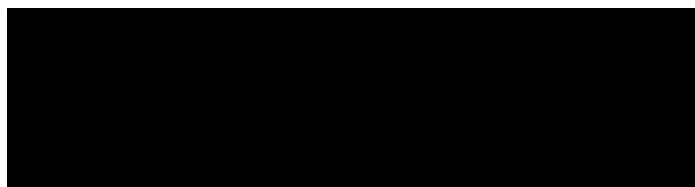
Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	[REDACTED]
Contact Name	[REDACTED]
Instrument	Heron H.Oil Interface Meter (30m)
Serial Number	16DM2403191FR
Client Name	[REDACTED] (AECOM)
Project Number	60739111 / 1.10.2
Comments	-

Instrument Check			
Item	Test	Test Passed	Comments
9V Battery	Klein Tools MM300 Multimeter	✓	Battery voltage reading above 7.9V
Battery Box	Check	✓	No damage
Face and Back Plates	Check	✓	No damage
Thumb Screws	Check	✓	Rubber ends intact
Tape Hangar/Protector	Check	✓	No damage
On/Off Button	Operation	✓	Button is functional
Buzzer	Operation	✓	Intermittent tone in H ₂ O, solid tone in product
LED Signal Light	Operation	✓	LED light functional – green and red
Probe	Operation/Check	✓	Decontaminated, cleaned and tested
Tape	Condition/Check	✓	Decontaminated and cleaned, no damage
Connection	Check	✓	Probe and link connected correctly and tightly
PCB	Operation	✓	Unit is fully functional
Electronics Panel	Orientation	✓	Correctly aligned

Instrument Readings		
Product	Buzzer	LED Light
H ₂ O	Intermittent	Blinking – Red
Petroleum	Solid	Steady – Red

Declaration
WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The interface meter was decontaminated, cleaned and tested with a mixture of tap water and petrol, shielded from ambient light.

Checked By	[REDACTED]
Calibration Date	01/10/2025
Calibration Due	01/04/2026

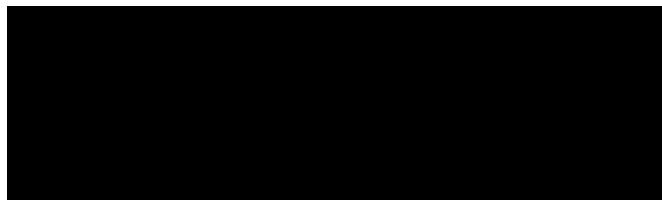


Company Name	WAM Scientific
Office Address	26 Bungarra Crescent, Chipping Norton NSW 2170
Phone Number	[REDACTED]
Contact Name	[REDACTED]
Instrument	YSI Pro Quatro Water Quality Meter w/ 1m Quatro Cable
Serial Number	23A107176
Client Name	[REDACTED] (AECOM)
Project Number	60739111 / 1.10.2
Comments	-

Instrument Check			
Item	Test	Test Passed	Comments
2 x Alkaline C-size Batteries	Klein Tools MM300 Multimeter	✓	Both batteries reading above 2.9V
Battery Saver Function	Operation	✓	Automatically turns off after 60 minutes if idle
Unit Display	Operation	✓	Screen visible, no damage
Keypad	Operation	✓	Responsive, no damage
Connection Port and Cable	Condition/Check	✓	Clean, no damage
Monitor Housing	Condition/Check	✓	No damage
Firmware	Version	✓	4.0.0
pH Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
pH millivolts for pH 7.00	Calibration	✓	pH 7.00 calibration range between 0 mV $\pm$ 50 mV
pH millivolts for pH 4.00	Calibration	✓	pH 4 mV range +165 to +180 from 7 buffer mV value
pH slope	Calibration	✓	Range between 55 to 60 mV/pH (ideal value 59 mV)
Response time < 90 seconds	Calibration	✓	Responds to correct value within 90 seconds
ORP Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
ORP Reading	Calibration	✓	Within $\pm$ 80 mV of reference Zobell Reading
Response time < 90 seconds	Calibration	✓	Responds to correct value within 90 seconds
Conductivity/Temp Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
Conductivity Cell	Calibration	✓	Conductivity cell constant 5.0 $\pm$ 1.0 in GLP file
Clean Sensor Readings	Calibration	✓	Clean sensor reads less than 3 uS/cm in dry air
Dissolved Oxygen Probe	Condition/Calibration	✓	Calibrated and conforms to manufacturer's specs
DO Cap	Condition/Calibration	✓	1.25 mil PE membrane (yellow membrane)
DO Sensor in Use	Condition	✓	Polarographic DO sensor
DO Sensor Value	Calibration	✓	(min 4.31 uA - max 8.00 uA) Avg 6.15 uA

Instrument Readings						
Parameter	Standard Used	Reference No.	Calibration Value	Observed	Actual	Units
Temperature	Centre 370 Thermometer	Room Temp.	23.3	21.4	23.3	°C
pH	pH 4.00	417183	4.01	4.11	4.01	pH
pH	pH 7.00	419528	7.00	7.05	7.00	pH
ORP	Zobell A & B	420448/418958	232.7	232.9	232.7	mV
Conductivity	2760 μ S/cm at 25°C	399819	2760	2598	2760	μ S/cm
Zero Dissolved O ₂	NaSO ₃ in Distilled H ₂ O	426184	0.0	0.4	0.0	%
100% Dissolved O ₂	100% Air Saturated H ₂ O	Fresh Air	100.0	94.6	100.0	%

Declaration	
WAM Scientific certifies that the above instrument was successfully tested according to manufacturer's standards and all necessary checks were conducted to ensure the instrument was fully operational prior to dispatch. The calibration data supplied was obtained in accordance with manufacturer's specifications using solutions of known values.	
Calibrated By	[REDACTED]
Calibration Date	01/10/2025
Calibration Due	01/04/2026



FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:		WLM OMP	Project Number:		60739111
Project Location:		Williamtown	Client:		DoD
PM Name:		[REDACTED]	Fieldwork Staff Name:		[REDACTED]
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.					
INSTRUMENT DETAILS					
Supplier:		WAM Scientific			
Make and Model:		Pro Quatro			
Serial Number:		23A107176			
CALIBRATION					
CALIBRATE WITH CALIBRATION SOLUTIONS					
Date and Time:		7/10/25 8:00			
Parameter		Acidity		Conductivity	
Units		pH	pH	µS/cm	Dissolved Oxygen
					ppm ppm
Calibration Standard Concentration:		4	7	2444	
Calibration Reading:		4.01	7.02	2442	
Calibration Temperature:		19.1	19.1	19.6	
ONGOING CHECKS					
BUMP TEST WITH CALIBRATION SOLUTION					
Date and Time:					
Parameter		Acidity		Conductivity	
Units		pH	pH	µS/cm	Dissolved Oxygen
					ppm ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					
COMMENTS					
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.					
Approval and Distribution					
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.					
[REDACTED]		7/10/25 Date			
Distribution: Project Central File					

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamtown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	Pro Quatro		
Serial Number:	23A107176		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	8/10/25 8:45am				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4	7	2444		
Calibration Reading:	4.01	7.00	2446		
Calibration Temperature:	19.3	19.5	19.6		

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:	8/10/25 8:35am				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4				
Bump Test Reading:	4.13				
Bump Test Temperature:	19.3				

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

*Bump before cal. for pH 4

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

Signature: _____ Date: 8/10/25

Distribution: Project Central File

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:		WLM OMP		Project Number:		60739111	
Project Location:		Williamtown		Client:		DoD	
PM Name:		[REDACTED]		Fieldwork Staff Name:		[REDACTED]	
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.							
INSTRUMENT DETAILS							
Supplier:		WAM Scientific					
Make and Model:		Pro Quatro					
Serial Number:		23A107176					
CALIBRATION							
CALIBRATE WITH CALIBRATION SOLUTIONS							
Date and Time:		9/10/25					
Parameter		Acidity		Conductivity		Dissolved Oxygen	
Units		pH		µS/cm		ppm	
Calibration Standard Concentration:		4		7		10	
Calibration Reading:		3.99		7.97		10.03	
Calibration Temperature:		20.1		20.2		20.1	
ONGOING CHECKS							
BUMP TEST WITH CALIBRATION SOLUTION							
Date and Time:							
Parameter		Acidity		Conductivity		Dissolved Oxygen	
Units		pH		µS/cm		ppm	
Calibration Standard Concentration:							
Bump Test Reading:							
Bump Test Temperature:							
COMMENTS							
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.							
							
Approval and Distribution							
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.							
[REDACTED]		[REDACTED]		9/10/25		Date	
Distribution: Project Central file							

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamtown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	Pro Quatro		
Serial Number:	23A107176		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	10/10/2025				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4	7		10	
Calibration Reading:	3.96	7.04		10.05	
Calibration Temperature:	19.5	19.5		19.5	

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:					
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Bump Test Reading:					
Bump Test Temperature:					

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

Signature	Date
	10/10/25

Distribution

Q4AN(EV)-410-FM1

Q4AN(EV)-410-FM1
FQM - Water Quality Meter Calibration Record (Q4AN(EV)-410-FM1)
Revision 1 May 2, 2016

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111	
Project Location:	Williamtown	Client:	DoD	
PM Name:	[REDACTED]	Fieldwork Staff Name:	[REDACTED]	
This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.				
INSTRUMENT DETAILS				
Supplier:	WAM Scientific			
Make and Model:	YSI Pro Quatro			
Serial Number:	23A107176			
CALIBRATION				
CALIBRATE WITH CALIBRATION SOLUTIONS				
Date and Time:	14/10/25			
Parameter	Acidity		Conductivity	Dissolved Oxygen
Units	pH	pH	µS/cm	ppm
Calibration Standard Concentration:	4	7	10	
Calibration Reading:	4.04	7.01	10.02	
Calibration Temperature:	19.2	19.2	19.2	
ONGOING CHECKS				
BUMP TEST WITH CALIBRATION SOLUTION				
Date and Time:				
Parameter	Acidity		Conductivity	Dissolved Oxygen
Units	pH	pH	µS/cm	ppm
Calibration Standard Concentration:				
Bump Test Reading:				
Bump Test Temperature:				
COMMENTS				
Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.				
Approval and Distribution				
☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.				
[REDACTED]		14/10/25		
Distribution Project Coordinator		Date		

Q4AN(EV)-410-FM1

Q4AN(EV)-410-FM1
FQM - Water Quality Meter Calibration Record (Q4AN(EV)-410-FM1)
Revision 1 May 2, 2016

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamtown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	Pro Quattro		
Serial Number:	23A107176		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	16/10/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Calibration Reading:					
Calibration Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

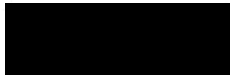
Date and Time:	16/10/25 7:50				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4.0	7.0	10.0		
Bump Test Reading:	3.99	6.97	10.01		
Bump Test Temperature:	19.7	19.6	19.7		

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.


16/10/25
 Staff Signature Date

Distribution: Project Central File

ANZ

FQM - Water Quality Meter Calibration Record

Q4AN(EV)-410-FM1

Project Name:	WLM OMP	Project Number:	60739111
Project Location:	Williamstown	Client:	DoD
PM Name:		Fieldwork Staff Name:	

This calibration record is intended to prompt fieldwork staff to calibrate water quality meter (WQM) daily before the start of fieldworks.

INSTRUMENT DETAILS

Supplier:	WAM Scientific		
Make and Model:	YSI EA Plus		
Serial Number:	23A107176		

CALIBRATION

CALIBRATE WITH CALIBRATION SOLUTIONS

Date and Time:	20/10/25				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:					
Calibration Reading:					
Calibration Temperature:					

ONGOING CHECKS

BUMP TEST WITH CALIBRATION SOLUTION

Date and Time:	20/10/25 8:15				
Parameter	Acidity		Conductivity	Dissolved Oxygen	
Units	pH	pH	µS/cm	ppm	ppm
Calibration Standard Concentration:	4	7			
Bump Test Reading:	4.03	7.02			
Bump Test Temperature:	19.1	19.3			

COMMENTS

Detail any equipment faults, minor maintenance performed, change of batteries or technical support provided.

Approval and Distribution

☐ Each individual instrument has been inspected and calibrated daily and bump tested as required by fieldwork staff.

 _____ Date	20/10/25 _____ Date
--	---------------------------

Distribution: Project Central File

Appendix D

Data Validation

DATA VALIDATION REPORT					
Project number:	60739111	Validation by:	NT	Date:	05/11/2025
Client:	Department of Defence	Data verified by:	ST	Date:	19/11/2025
Site:	RAAF Base Williamtown				
Matrix type:	Groundwater, Bore water, Surface water and Sediment				
Primary samples:	69 Groundwater samples, 2 bore water samples, 24 Surface water samples and 25 Sediment samples				
Laboratory:	Primary: ALS, Secondary: Envirolab				
Lab reference:	ALS: ES2531506, ES2532067, ES2532657, ES2532693, ES2532694, ES2532695, ES2532709, ES2532710, ES2532712, ES2532713, ES2532715, ES2532716, ES2532717, ES2532721, ES2532722, ES2532723 and ES2532725 Envirolab: 393324, 393326 and 393327				
Key Issues:	No QA/QC issues were identified in the field or laboratory datasets that could have a material implication to decision-making on the project.				
Field Quality Assurance and Quality Control					
Field DQOs and DQIs	The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (AECOM, 2025).				
Sampling personnel	The sampling event was conducted between 07/10/2025 and 20/10/2025. The sampling was conducted by suitably qualified and experienced AECOM Environmental Scientists and Engineers.				
Sampling Methodology	All water and sediment samples were collected in accordance with the methodology outlined in the SAQP (AECOM, 2025). After each sample was collected, reusable equipment was decontaminated using Liquinox and potable water, and the consumables (nitrile gloves and HydraSleeve™ material) were disposed of in waste bins.				
Chain of Custody (COC)	All samples collected were reported on the Chain of Custody documents (COC) and subsequent email amendments and analysed for requested analytes.				
Rinsate Blank	Rinsate blank samples were collected at a frequency of 1 per day of sampling per sampling team where equipment was re-used and decontaminated between sample points. Rinsate blank samples were either collected from the final rinse of the interface probe or the trowel, using laboratory-supplied de-ionised water. A total of 8 rinsate blank samples were collected.				
Frequency of field QC	Field duplicates (intra-laboratory duplicates) were collected at/above the required frequency of 1 in 10 primary samples (10%) for water samples and 1 in 20 primary samples (5%) for sediment samples. Overall, 12 duplicates and 13 triplicates were collected for 120 primary samples, these comprised: 10 water field duplicates and 11 water field triplicates, which were collected for 95 primary water samples (10.5 % frequency for field duplicates and 11.6% frequency for field triplicates) 2 sediment field duplicates and 2 sediment field triplicates, which were collected for 25 primary sediment samples in total (8% frequency for both).				
Handling and preservation	All samples were received at the primary and secondary laboratories in appropriate containers with temperatures between 1.7°C to 5.5°C (with ice present), within the recommended temperature range (<6°C).				
Calibration of equipment	Measurements of water geochemical parameters were undertaken using YSI Professional Plus water quality meters, which were calibrated by the supplier prior to use, in accordance with the manufacturer's instructions and bump tested daily by the field personnel. Measurements of depth to groundwater were undertaken using interface probes, which were serviced by the supplier prior to use. All equipment calibration and service certificates are presented in Appendix C.				
Laboratory QA/QC					
Laboratory DQOs and DQIs	The data quality objectives (DQOs) and data quality indicators (DQIs) adopted for these works are presented in the SAQP (AECOM, 2025).				

DATA VALIDATION REPORT	
Tests requested/reported	All samples were analysed for per- and polyfluoroalkyl substances (PFAS) full suite, at the standard level of detection or low-level detection. All sample requests for analysis are reported on the Chain of Custody (COC) and subsequent email amendments.
Holding time compliance	All samples were extracted and analysed by the laboratory within the recommended holding times, with the exception of the following: ES2532694: moisture content 1-2 days overdue for analysis Given moisture content is not a CoPC, this holding time non-compliance does not affect data interpretation.
Laboratory accreditation	The primary laboratory analysis was conducted by ALS Environmental Pty Ltd (Sydney) a National Association of Testing Authorities (NATA) accredited laboratory (Accreditation No. 825). The secondary samples were analysed at Envirolab Services, also a NATA accredited laboratory (accreditation number 2901).
Frequency of laboratory QC	The primary laboratory ALS reported a sufficient frequency of quality control samples to assess whether the results have been reported with acceptable accuracy and precision, with the exception of the following: - ES2532067: Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS – 0% - ES2532657: Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS – 7.69% For workorder ES2532067, laboratory duplicates were reported at the required frequencies on a previous analysis of the sample under a separate workorder.
Method Blank	All method blank concentrations were reported <LOR (limit of reporting) for the analytes tested, meeting the project requirements. This is presented in the Quality Control Reports for both laboratories.
Laboratory duplicate RPDs	The reported Relative Percentage Differences (RPDs) for laboratory duplicates were within laboratory control limits. The RPDs for laboratory duplicates are presented in the Quality Control Reports for both laboratories.
LCS recovery	Laboratory control spike (LCS) recoveries were reported within control limits. This is presented in the Quality Control Reports for both laboratories.
Matrix spike recovery	Matrix spike (MS) recoveries were reported within control limits, with the exception of matrix spike recoveries that were not determined for the following: - ES2532657: Perfluorohexane sulfonic acid (PFHxS), 0908_MW220S_251020 - ES2532657: Perfluorooctane sulfonic acid (PFOS), 0908_MW220S_251020 - ES2532693: Various analytes, Anonymous - ES2532695: Perfluorooctane sulfonic acid (PFOS), 0908_SW005_251007 - ES2532709: Various analytes, Anonymous - ES2532712: Perfluorooctane sulfonic acid (PFOS), 0908_SD019_251014 - ES2532713: Perfluorooctane sulfonic acid (PFOS), Anonymous - ES2532716: Perfluorooctane sulfonic acid (PFOS), Anonymous - ES2532717: Various analytes, Anonymous - ES2532723: Various analytes, Anonymous These non-determinations were due to background levels being greater than or equal to four times spike levels, which do not reflect method bias or affect data interpretation. Matrix spike (MS) recoveries were reported within control limits, with the exception of matrix spike recoveries that were reported greater than upper data quality objective: - ES2532694: with matrix recovery of 146% for PFOS in sediment sample 0908_SD001_251007. The potential exists for concentrations of PFOS to be over reported which should be taken into consideration when interpreting concentrations for PFOS. It is however noted that the reported concentration of PFOS in SD005 (for sample collected in October 2025) was within historical ranges, indicating that the high matrix spike recovery has not impacted the reported concentrations.
Surrogate spike recovery	The reported surrogate spike recoveries were within laboratory control limits.
QA/QC Data Evaluation	

DATA VALIDATION REPORT	
Comparison of Field Observations and Laboratory Results	No anomalies between field observations and analytical results were noted.
Data transcription	A check of the laboratory results identified no anomalies within the electronic data, the laboratory reports, and the tables generated by AECOM.
Limits of reporting	The laboratory LORs were sufficiently low to enable assessment against adopted guideline criteria, with the following exceptions: • PFAS NEMP Freshwater 99% species protection (HEPA, 2025) for PFOS values • Australian Drinking Water Guidelines (NHMRC, 2025) for PFOS value, where analysed at the standard LOR.
Rinsate Blank sample results	The concentrations of PFAS in the Rinsate Blank samples (Table D3) were below the LOR, indicating decontamination procedures were adequate.
RPDs for Field Duplicates / Triplicates	RPDs for field duplicates (intra-laboratory duplicates) and triplicates (inter-laboratory duplicates), where calculable were reported within acceptable limits ($\leq 30\%$, or $\leq 50\%$ for results 10-20 x LOR, or No Limit for results < 10 x LOR) (see Table D1 and Table D2), with the exception of: Sediment (Table D1) • PFOS RPD of 94% for inter-lab duplicate pair (SD005 and QC200). The elevated RPD for sediment is likely to be attributed to the heterogeneous nature of the sediment sampled. Note that when sampling, care was taken to ensure potential heterogeneity was reduced, by dividing the sample collected between primary, inter and intra-laboratory jars. The highest reported concentration will be used when using the data quantitatively. Water (Table D2) • Individual PFAS compound RPDs for intra-lab duplicates ranged between 43% and 146%. • Individual PFAS compound RPDs for inter-lab duplicates which ranged between 53% and 198%. RPD exceedances were reported in one duplicate pair (for MW167/QC108) and two triplicate pairs (for MW167/QC208 and MW169D/QC209) for water matrices. However, given that the concentrations between the primary and duplicate (inter and intra duplicate) samples were within same order of magnitude, the RPD exceedances are considered acceptable.
Overall Assessment	
Data validation procedure employed in the assessment of the field and laboratory QA/QC data indicated that the reported analytical results are representative of the sample locations and that the overall quality of the analytical data produced is acceptably reliable for the purpose of this report.	

Attached:

Table D1 – Sediment Duplicate RPDs

Table D2 – Water Duplicate RPDs

Table D3 – Rinsate Blank Results

Table D1 - Sediment Duplicate RPDs

Lab Report Number Field ID Matrix Type Date			ES2532694		ES2532694		RPD	393324		RPD	ES2532694		ES2532694		RPD	ES2532694		393324		RPD		
			0908_SD005_251007		0908_QC100_251007			0908_SD005_251007			0908_QC200_251007		0908_SD062_251007			0908_QC103_251007		0908_SD062_251007			0908_QC203_251007	
			Soil		Soil			Soil			Soil		Soil			Soil		Soil			Soil	
			07 Oct 2025		07 Oct 2025			07 Oct 2025			07 Oct 2025		07 Oct 2025			07 Oct 2025		07 Oct 2025			07 Oct 2025	
			Unit	LOR																		
PFAS																						
Perfluorooctanoic acid (PFOA)	mg/kg	0.0001	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0001	0.0128	0.0124	3	0.0128	0.0046	94	<0.0002	0.0004	nc	<0.0002	0.0001	nc	<0.0002	<0.0002	0.0001	nc	nc			
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0001	0.0009	0.0006	40	0.0009	0.0003	100	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Sum of PFHxS and PFOS	mg/kg	0.0001	0.0137	0.0130	5	0.0137	0.0050	93	<0.0002	0.0004	nc	<0.0002	0.0001	nc	<0.0002	<0.0002	0.0001	nc	nc			
Sum of PFAS	mg/kg	0.0001	0.0140	0.0132	6	0.0140	0.0050	95	<0.0002	0.0004	nc	<0.0002	0.0001	nc	<0.0002	<0.0002	0.0001	nc	nc			
PFAS - Perfluoroalkyl Sulfonic Acids																						
Perfluoropropanesulfonic acid (PFPrS)	mg/kg	0.0005	<0.0005	<0.0005	nc	<0.0005	-	nc	<0.0005	<0.0005	nc	<0.0005	-	nc	<0.0005	<0.0005	-	nc	nc			
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0001	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0001	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0001	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Perfluorononanesulfonic acid (PFNS)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	-	nc	<0.0002	<0.0002	nc	<0.0002	-	nc	<0.0002	<0.0002	-	nc	nc			
Perfluorodecane sulfonic acid (PFDS)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	<0.0002	nc	nc			
PFAS - Perfluoroalkyl Carboxylic Acids																						
Perfluorobutanoic acid (PFBA)	mg/kg	0.0002	<0.001	<0.001	nc	<0.001	<0.0002	nc	<0.001	<0.001	nc	<0.001	<0.001	nc	<0.001	<0.001	<0.0002	nc	nc			
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	<0.0002	nc	nc			
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0001	0.0003	0.0002	40	0.0003	0.0001	100	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0001	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Perfluorononanoic acid (PFNA)	mg/kg	0.0001	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	nc	<0.0002	<0.0001	nc	<0.0002	<0.0002	<0.0001	nc	nc			
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	<0.0005	nc	nc			
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	<0.0005	nc	nc			
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	<0.0005	nc	nc			
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	nc	<0.0002	<0.0005	nc	<0.0002	<0.0002	<0.0005	nc	nc			
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005	<0.0005	<0.0005	nc	<0.0005	<0.005	nc	<0.0005	<0.0005	nc	<0.0005	<0.0005	nc	<0.0005	<0.0005	<0.005	nc	nc			
PFAS - (n:2) Fluorotelomer Sulfonic Acids																						
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0001	<0.0005	<0.0005	nc	<0.0005	<0.0001	0	<0.0005	<0.0005	nc	<0.0005	<0.0001	nc	<0.0005	<0.0005	<0.0001	nc	nc			
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	mg/kg	0.0001	<0.0005	<0.0005	nc	<0.0005	<0.0001	0	<0.0005	<0.0005	nc	<0.0005	<0.0001	nc	<0.0005	<0.0005	<0.0001	nc	nc			
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0002	<0.0005	<0.0005	nc	<0.0005	<0.0002	0	<0.0005	<0.0005	nc	<0.0005	<0.0002	nc	<0.0005	<0.0005	<0.0002	nc	nc			
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0002	<0.0005	<0.0005	nc	<0.0005	<0.0002	0	<0.0005	<0.0005	nc	<0.0005	<0.0002	nc	<0.0005	<0.0005	<0.0002	nc	nc			
PFAS - Perfluoroalkyl Sulfonamides																						
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.001	nc	<0.0002	<0.0002	nc	<0.0002	<0.001	nc	<0.0002	<0.0002	<0.001	nc	nc			
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005	<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	<0.001	nc	nc			
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	<0.0002	nc	nc			
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	mg/kg	0.0005	<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	<0.001	nc	nc			
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005	<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	nc	<0.0005	<0.001	nc	<0.0005	<0.0005	<0.001	nc	nc			
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	nc	<0.0002	<0.0002	<0.0002	nc	nc			
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005	<0.0005	<0.0005	nc	<0.0005	<0.005	nc	<0.0005	<0.0005	nc	<0.0005	<0.005	nc	<0.0005	<0.0005	<0.005	nc	nc			

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number			Date	07 Oct 2025		07 Oct 2025		RPD	07 Oct 2025		07 Oct 2025		RPD	07 Oct 2025		07 Oct 2025		RPD
			Field ID	0908_SW005_251007	0908_QC101_251007	0908_SW005_251007	0908_QC201_251007		0908_SW023_251007	0908_QC102_251007	0908_SW023_251007	0908_QC202_251007						
			Matrix Type	ES2532695	ES2532695	ES2532695	393326		ES2532695	ES2532695	ES2532695	393326						
			Water	Water	Water	Water	Water		Water	Water	Water							
	Unit	LOR																
PFAS																		
Perfluorooctanoic acid (PFOA)	µg/L	0.001	0.02	0.02	0	0.02	0.02	0	<0.01	0.01	nc	<0.01	<0.01	nc				
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	0.98	0.88	11	0.98	0.97	1	0.15	0.15	0	0.15	0.11	31				
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	0.27	0.27	0	0.27	0.24	12	0.16	0.16	0	0.16	0.12	29				
Sum of PFHxS and PFOS	µg/L	0.001	1.25	1.15	8	1.25	1.2	4	0.31	0.31	0	0.31	0.23	30				
Sum of PFAS	µg/L	0.001	1.35	1.24	8	1.35	1.3	4	0.35	0.36	3	0.35	0.28	22				
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.02	nc	<0.02	-	nc	<0.02	<0.02	nc	<0.02	-	nc				
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	<0.02	<0.02	nc	<0.02	0.02	nc	<0.02	<0.02	nc	<0.02	0.02	nc				
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	<0.02	<0.02	nc	<0.02	0.02	nc	<0.02	<0.02	nc	<0.02	0.01	nc				
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	0.02	0.02	0	0.02	0.03	40	<0.02	<0.02	nc	<0.02	<0.01	nc				
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	<0.02	<0.02	nc	<0.02	-	nc	<0.02	<0.02	nc	<0.02	-	nc				
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc				
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	-	nc	<0.05	<0.05	nc	<0.05	-	nc				
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.1	nc	<0.1	<0.02	nc	<0.1	<0.1	nc	<0.1	<0.02	nc				
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc				
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	0.06	0.05	18	0.06	0.03	67	0.04	0.04	0	0.04	0.01	120				
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	<0.02	<0.02	nc	<0.02	0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc				
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc				
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc				
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc				
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.05	nc	<0.02	<0.02	nc	<0.02	<0.05	nc				
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc				
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc				
PFAS - (n:2) Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc				
PFAS - Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc				
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc				
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc				
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.1	nc	<0.05	<0.05	nc	<0.05	<0.1	nc				
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc				
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc				

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number		Date	08 Oct 2025		RPD	08 Oct 2025		RPD	08 Oct 2025		RPD	08 Oct 2025		RPD
		Field ID	0908_MW132D_251008	0908_QC104_251008		0908_MW132D_251008	0908_QC204_251008		0908_MW241S_251008	0908_QC105_251008		0908_MW241S_251008	0908_QC205_251008	
		Matrix Type	ES2532693	ES2532693		ES2532693	393327		ES2532693	ES2532693		ES2532693	393327	
			Water	Water		Water	Water		Water	Water		Water	Water	
	Unit	LOR												
PFAS														
Perfluorooctanoic acid (PFOA)	µg/L	0.001	0.01	<0.01	nc	0.01	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.001	nc
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	0.16	0.28	55	0.16	<0.01	nc	0.004	<0.002	nc	0.004	0.001	120
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	0.07	0.11	44	0.07	0.07	0	0.009	0.013	36	0.009	0.009	0
Sum of PFHxS and PFOS	µg/L	0.001	0.23	0.39	52	0.23	0.07	107	0.013	0.013	0	0.013	0.010	26
Sum of PFAS	µg/L	0.001	0.27	0.42	43	0.27	0.10	92	0.013	0.015	14	0.013	0.018	32
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.02	nc	<0.02	-	nc	<0.01	<0.01	nc	<0.01	-	nc
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	0.002	nc
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	0.002	nc	<0.002	0.002	nc
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	<0.02	<0.02	nc	<0.02	0.01	nc	<0.002	<0.002	nc	<0.002	<0.001	nc
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	<0.02	<0.02	nc	<0.02	-	nc	-	-	nc	-	-	nc
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	-	nc	<0.005	<0.005	nc	<0.005	-	nc
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.1	nc	<0.1	<0.02	nc	<0.01	<0.01	nc	<0.01	0.005	nc
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	0.03	0.03	0	0.03	0.02	nc	<0.002	<0.002	nc	<0.002	<0.001	nc
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.001	nc
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.001	nc
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.05	nc	<0.002	<0.002	nc	<0.002	<0.005	nc
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.002	<0.002	nc	<0.002	<0.01	nc
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.005	<0.005	nc	<0.005	<0.05	nc
PFAS - (n:2) Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.005	<0.005	nc	<0.005	<0.001	nc
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.005	<0.005	nc	<0.005	<0.001	nc
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.005	<0.005	nc	<0.005	<0.002	nc
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.005	<0.005	nc	<0.005	<0.002	nc
PFAS - Perfluoroalkyl Sulfonamides														
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.002	<0.002	nc	<0.002	<0.01	nc
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.1	nc	<0.005	<0.005	nc	<0.005	<0.1	nc
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc	<0.002	<0.002	nc
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.005	<0.005	nc	<0.005	<0.5	nc

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number		Date	09 Oct 2025		RPD	09 Oct 2025		RPD	09 Oct 2025		RPD	09 Oct 2025		RPD
		Field ID	0908_MW342D_251009	0908_QC106_251009		0908_MW342D_251009	0908_QC206_251009		0908_SW048_251009	0908_QC107_251009		0908_SW048_251009	0908_QC207_251009	
		Matrix Type	ES2532693	ES2532693		ES2532693	393327		ES2532695	ES2532695		ES2532695	393326	
			Water	Water		Water	Water		Water	Water		Water	Water	
	Unit	LOR												
PFAS														
Perfluorooctanoic acid (PFOA)	µg/L	0.001	<0.01	<0.01	0	<0.01	<0.01	nc	0.10	0.10	0	0.10	0.09	11
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	0.01	0.02	67	0.01	0.02	67	1.04	1.02	2	1.04	1.1	6
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	0.30	0.35	15	0.30	0.29	3	1.02	1.05	3	1.02	0.82	22
Sum of PFHxS and PFOS	µg/L	0.001	0.31	0.37	18	0.31	0.31	0	2.06	2.07	0	2.06	1.9	8
Sum of PFAS	µg/L	0.001	0.55	0.65	17	0.55	0.51	8	2.64	2.67	1	2.64	2.5	5
PFAS - Perfluoroalkyl Sulfonic Acids														
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	0.04	0.04	0	0.04	-	nc	0.02	0.02	0	0.02	-	nc
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	0.06	0.08	29	0.06	0.08	29	0.06	0.07	15	0.06	0.08	29
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	0.06	0.07	15	0.06	0.06	0	0.09	0.09	0	0.09	0.09	0
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	<0.02	<0.02	0	<0.02	<0.01	nc	0.08	0.08	0	0.08	0.11	32
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	<0.02	<0.02	0	<0.02	-	nc	<0.02	<0.02	nc	<0.02	-	nc
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc
PFAS - Perfluoroalkyl Carboxylic Acids														
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.05	<0.05	0	<0.05	-	nc	<0.05	<0.05	nc	<0.05	-	nc
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.1	0	<0.1	<0.02	nc	<0.1	<0.1	nc	<0.1	<0.02	nc
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.02	nc	0.04	0.04	0	0.04	0.04	0
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	0.08	0.09	12	0.08	0.06	29	0.16	0.17	6	0.16	0.09	56
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	<0.02	<0.02	0	<0.02	0.01	nc	0.03	0.03	0	0.03	0.04	29
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.02	<0.02	0	<0.02	<0.01	nc	<0.02	<0.02	nc	<0.02	<0.01	nc
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.05	nc	<0.02	<0.02	nc	<0.02	<0.05	nc
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc
PFAS - (n:2) Fluorotelomer Sulfonic Acids														
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001	<0.05	<0.05	0	<0.05	<0.01	nc	<0.05	<0.05	nc	<0.05	<0.01	nc
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002	<0.05	<0.05	0	<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002	<0.05	<0.05	0	<0.05	<0.02	nc	<0.05	<0.05	nc	<0.05	<0.02	nc
PFAS - Perfluoroalkyl Sulfonamides														
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.1	nc	<0.02	<0.02	nc	<0.02	<0.1	nc
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.1	nc	<0.05	<0.05	nc	<0.05	<0.1	nc
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	0	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	0	<0.05	<0.5	nc	<0.05	<0.05	nc	<0.05	<0.5	nc

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number			Date	10 Oct 2025		10 Oct 2025		RPD	10 Oct 2025		10 Oct 2025		RPD	10 Oct 2025		10 Oct 2025		RPD
			Field ID	0908_MW167_251010	0908_QC108_251010	RPD	0908_MW167_251010		0908_QC208_251010	RPD	0908_MW169D_251010	0908_QC209_251010		RPD	0908_MW278D_251010	0908_QC110_251010		
			Matrix Type	ES2532693	ES2532693		ES2532693		393327		ES2532693	393327			ES2532693	ES2532693		
			Water	Water	Water		Water		Water		Water	Water			Water			
	Unit	LOR																
PFAS																		
Perfluorooctanoic acid (PFOA)	µg/L	0.001	0.03	0.08	91	0.03	0.01	100	0.01	<0.01	nc	<0.002	<0.002	nc				
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	1.40	9.00	146	1.40	3.0	73	3.52	0.02	198	0.005	0.006	18				
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	0.32	0.77	83	0.32	0.1	105	0.13	<0.01	nc	0.007	0.007	0				
Sum of PFHxS and PFOS	µg/L	0.001	1.72	9.77	140	1.72	3.1	57	3.65	0.02	198	0.012	0.013	8				
Sum of PFAS	µg/L	0.001	1.86	10.3	139	1.86	3.2	53	3.70	0.02	198	0.012	0.013	8				
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.02	<0.02	nc	<0.02	-	nc	<0.02	-	nc	<0.01	<0.01	nc				
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	<0.02	0.02	nc	<0.02	<0.01	0	<0.02	<0.01	nc	<0.002	<0.002	nc				
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	<0.02	0.04	nc	<0.02	<0.01	0	<0.02	<0.01	nc	<0.002	<0.002	nc				
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	0.03	0.07	80	0.03	<0.01	nc	<0.02	<0.01	nc	<0.002	<0.002	nc				
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	<0.02	0.05	nc	<0.02	-	nc	<0.02	-	nc	-	-	nc				
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc				
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	-	nc	<0.05	-	nc	<0.005	<0.005	nc				
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.1	<0.1	nc	<0.1	<0.02	nc	<0.1	<0.02	nc	<0.01	<0.01	nc				
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	0.02	0.06	100	0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc				
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	0.06	0.18	100	0.06	0.02	100	0.04	<0.01	nc	<0.002	<0.002	nc				
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	<0.02	0.04	nc	<0.02	<0.01	nc	<0.02	<0.01	nc	<0.002	<0.002	nc				
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.02	<0.02	nc	<0.02	<0.01	nc	<0.02	<0.01	nc	<0.002	<0.002	nc				
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc				
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc				
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.05	nc	<0.02	<0.05	nc	<0.002	<0.002	nc				
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.1	nc	<0.002	<0.002	nc				
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.5	nc	<0.005	<0.005	nc				
PFAS - (n:2) Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.01	nc	<0.005	<0.005	nc				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001	<0.05	<0.05	nc	<0.05	<0.01	nc	<0.05	<0.01	nc	<0.005	<0.005	nc				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.02	nc	<0.005	<0.005	nc				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002	<0.05	<0.05	nc	<0.05	<0.02	nc	<0.05	<0.02	nc	<0.005	<0.005	nc				
PFAS - Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.1	nc	<0.02	<0.1	nc	<0.002	<0.002	nc				
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc				
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc				
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.05	<0.05	nc	<0.005	<0.005	nc				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.1	nc	<0.05	<0.1	nc	<0.005	<0.005	nc				
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.02	<0.02	nc	<0.002	<0.002	nc				
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.05	<0.05	nc	<0.05	<0.5	nc	<0.05	<0.5	nc	<0.005	<0.005	nc				

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

Lab Report Number			Date	10 Oct 2025		10 Oct 2025		RPD	10 Oct 2025		10 Oct 2025		RPD	10 Oct 2025		10 Oct 2025		RPD
			Field ID	0908_MW278D_251010	0908_QC210_251010	0908_MW125S_251010	0908_QC111_251010		0908_MW125S_251010	0908_QC211_251010	0908_MW146AD_251010	0908_QC112_251010						
			Matrix Type	ES2532693	393327	ES2532693	ES2532693		ES2532693	393327	ES2532693	ES2532693						
			Water	Water	Water	Water	Water		Water	Water	Water							
	Unit	LOR																
PFAS																		
Perfluorooctanoic acid (PFOA)	µg/L	0.001	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc				
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	0.005	0.005	0	<0.002	<0.002	nc	<0.002	<0.001	nc	0.004	0.002	67				
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	0.007	0.004	55	<0.002	0.002	nc	<0.002	0.002	nc	<0.002	<0.002	nc				
Sum of PFHxS and PFOS	µg/L	0.001	0.012	0.009	29	<0.002	0.002	nc	<0.002	0.002	nc	0.004	0.002	67				
Sum of PFAS	µg/L	0.001	0.012	0.009	29	<0.002	0.018	nc	<0.002	0.002	nc	0.004	0.002	67				
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.01	-	nc	<0.01	<0.01	nc	<0.01	-	nc	<0.01	<0.01	nc				
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc				
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc				
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc				
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	-	-	nc	-	-	nc	-	-	nc	-	-	nc				
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc				
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.005	-	nc	<0.005	<0.005	nc	<0.005	-	nc	<0.005	<0.005	nc				
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.01	<0.004	nc	<0.01	<0.01	nc	<0.01	<0.002	nc	<0.01	<0.01	nc				
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc				
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc				
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc				
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.002	<0.001	nc	<0.002	<0.002	nc	<0.002	<0.001	nc	<0.002	<0.002	nc				
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc				
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc				
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.002	<0.005	nc	<0.002	<0.002	nc	<0.002	<0.005	nc	<0.002	<0.002	nc				
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.002	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.01	nc	<0.002	<0.002	nc				
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.005	<0.005	nc				
PFAS - (n:2) Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.005	<0.001	nc	<0.005	<0.005	nc	<0.005	<0.001	nc	<0.005	<0.005	nc				
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001	<0.005	<0.001	nc	<0.005	<0.005	nc	<0.005	<0.001	nc	<0.005	<0.005	nc				
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002	<0.005	<0.002	nc	<0.005	<0.005	nc	<0.005	<0.002	nc	<0.005	<0.005	nc				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002	<0.005	<0.002	nc	<0.005	<0.005	nc	<0.005	<0.002	nc	<0.005	<0.005	nc				
PFAS - Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.002	<0.01	nc	<0.002	<0.002	nc	<0.002	<0.01	nc	<0.002	<0.002	nc				
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.005	<0.005	nc				
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc	<0.002	<0.002	nc				
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.005	<0.05	nc	<0.005	<0.005	nc	<0.005	<0.05	nc	<0.005	<0.005	nc				
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.005	<0.1	nc	<0.005	<0.005	nc	<0.005	<0.1	nc	<0.005	<0.005	nc				
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.002	<0.002	nc	<0.002	0.016	nc	<0.002	<0.002	nc	<0.002	<0.002	nc				
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.005	<0.5	nc	<0.005	<0.005	nc	<0.005	<0.5	nc	<0.005	<0.005	nc				

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D2 - Water Duplicate RPDs

			Date	10 Oct 2025	10 Oct 2025	RPD
			Field ID	0908_MW146AD_251010	0908_QC212_251010	
Lab Report Number			ES2532693		393327	
Matrix Type			Water		Water	
	Unit	LOR				
PFAS						
Perfluorooctanoic acid (PFOA)	µg/L	0.001	<0.002	<0.001	nc	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.001	0.004	0.002	67	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.001	<0.002	<0.001	nc	
Sum of PFHxS and PFOS	µg/L	0.001	0.004	0.002	67	
Sum of PFAS	µg/L	0.001	0.004	0.002	67	
PFAS - Perfluoroalkyl Sulfonic Acids						
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.01	-	nc	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.001	<0.002	<0.001	nc	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.001	<0.002	<0.001	nc	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.001	<0.002	<0.001	nc	
Perfluorononanesulfonic acid (PFNS)	µg/L	0.02	-	-	nc	
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.002	<0.002	nc	
PFAS - Perfluoroalkyl Carboxylic Acids						
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.005	-	nc	
Perfluorobutanoic acid (PFBA)	µg/L	0.002	<0.01	<0.002	nc	
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.002	<0.002	nc	
Perfluorohexanoic acid (PFHxA)	µg/L	0.001	<0.002	<0.001	nc	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.001	<0.002	<0.001	nc	
Perfluorononanoic acid (PFNA)	µg/L	0.001	<0.002	<0.001	nc	
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.002	<0.002	nc	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.002	<0.002	nc	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.002	<0.005	nc	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.002	<0.01	nc	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.005	<0.05	nc	
PFAS - (n:2) Fluorotelomer Sulfonic Acids						
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.001	<0.005	<0.001	nc	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.001	<0.005	<0.001	nc	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.002	<0.005	<0.002	nc	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.002	<0.005	<0.002	nc	
PFAS - Perfluoroalkyl Sulfonamides						
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.002	<0.01	nc	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.005	<0.05	nc	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.002	<0.002	nc	
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.005	<0.05	nc	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.005	<0.1	nc	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.002	<0.002	nc	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.005	<0.5	nc	

Notes
LOR = Limit of Reporting
nc = non calculable as concentrations in one or both samples are <LOR
High RPDs (>30%, or >50% for results 10-20 x LOR) are highlighted in bold

Table D3 - Rinsate Blank Results

Lab Report Number			ES2532693		ES2532693		ES2532693		ES2532693		ES2532693		ES2532693		ES2532693			
Field ID			0908_QC300_251007		0908_QC301_251008		0908_QC302_251009		0908_QC303_251010		0908_QC304_251013		0908_QC305_251014		0908_QC306_251015		0908_QC307_251016	
Matrix Type			Water		Water		Water		Water		Water		Water		Water		Water	
Date			07 Oct 2025		08 Oct 2025		09 Oct 2025		10 Oct 2025		13 Oct 2025		14 Oct 2025		15 Oct 2025		16 Oct 2025	
	Unit	EQL																
PFAS																		
Perfluorooctanoic acid (PFOA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctane sulfonic acid (PFOS)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Sum of PFHxS and PFOS	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Sum of PFAS	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
PFAS - Perfluoroalkyl Sulfonic Acids																		
Perfluoropropanesulfonic acid (PFPrS)	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluorobutane sulfonic acid (PFBS)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropentane sulfonic acid (PFPeS)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroheptane sulfonic acid (PFHpS)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecane sulfonic acid (PFDS)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
PFAS - Perfluoroalkyl Carboxylic Acids																		
Perfluorohexadecanoic acid (PFHxDA)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Perfluorobutanoic acid (PFBA)	µg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexanoic acid (PFHxA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroheptanoic acid (PFHpA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorononanoic acid (PFNA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecanoic acid (PFDA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroundecanoic acid (PFUnDA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorododecanoic acid (PFDoDA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
PFAS - (n:2) Fluorotelomer Sulfonic Acids																		
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
PFAS - Perfluoroalkyl Sulfonamides																		
Perfluorooctane sulfonamide (FOSA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
N-methyl perfluorooctane sulfonamidoethanol (MeFOSE)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	µg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	µg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	

Notes
LOR = Limit of Reporting

Appendix E

Laboratory Certificates



CERTIFICATE OF ANALYSIS

Work Order : **ES2531506**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.12**
C-O-C number : **89411**
Sampler : **[REDACTED]**
Site : **Offsite 1 additional**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **3**
No. of samples analysed : **1**

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **09-Oct-2025 16:14**
Date Analysis Commenced : **10-Oct-2025**
Issue Date : **14-Oct-2025 13:06**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Inorganics, Smithfield, NSW
	Organic Chemist	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SOLID
 (Matrix: SOIL)

Sample ID

0908_OTH095_25100
9

Sampling date / time

09-Oct-2025 15:07

Compound	CAS Number	LOR	Unit
			Result

ES2531506-001

EA055: Moisture Content (Dried @ 105-110°C)

Moisture Content	----	0.1	%	17.9	----	----	----	----
------------------	------	-----	---	------	------	------	------	------

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0003	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0032	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0007	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0473	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0004	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0008	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0040	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0007	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	0.0008	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0014	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----



Analytical Results

Sub-Matrix: SOLID
 (Matrix: SOIL)

Sample ID

0908_OTH095_25100
9

Sampling date / time

09-Oct-2025 15:07

Compound CAS Number LOR Unit

ES2531506-001

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorotetradecanoic acid
(PFTeDA)

376-06-7

0.0005

mg/kg

<0.0005

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
(FOSA)

754-91-6

0.0002

mg/kg

<0.0002

N-Methyl perfluorooctane
sulfonamide (MeFOSA)

31506-32-8

0.0005

mg/kg

<0.0005

N-Ethyl perfluorooctane
sulfonamide (EtFOSA)

4151-50-2

0.0005

mg/kg

<0.0005

N-Methyl perfluorooctane
sulfonamidoethanol (MeFOSE)

24448-09-7

0.0005

mg/kg

<0.0005

N-Ethyl perfluorooctane
sulfonamidoethanol (EtFOSE)

1691-99-2

0.0005

mg/kg

<0.0005

N-Methyl perfluorooctane
sulfonamidoacetic acid
(MeFOSAA)

2355-31-9

0.0002

mg/kg

<0.0002

N-Ethyl perfluorooctane
sulfonamidoacetic acid
(EtFOSAA)

2991-50-6

0.0002

mg/kg

<0.0002

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
(4:2 FTS)

757124-72-4

0.0005

mg/kg

<0.0005

6:2 Fluorotelomer sulfonic acid
(6:2 FTS)

27619-97-2

0.0005

mg/kg

<0.0005

8:2 Fluorotelomer sulfonic acid
(8:2 FTS)

39108-34-4

0.0005

mg/kg

<0.0005

10:2 Fluorotelomer sulfonic acid
(10:2 FTS)

120226-60-0

0.0005

mg/kg

<0.0005

EP231P: PFAS Sums

Sum of PFAS

0.0002

mg/kg

0.0596

Sum of PFHxS and PFOS

355-46-4/1763-23-1

0.0002

mg/kg

0.0505

Sum of PFAS (WA DER List)

0.0002

mg/kg

0.0560

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SOLID (Matrix: SOIL)			Sample ID	0908_OTH095_25100 9	----	----	----	----
Sampling date / time				09-Oct-2025 15:07	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2531506-001	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.0002	%	101	----	----	----	----
13C8-PFOA	----	0.0002	%	103	----	----	----	----



Surrogate Control Limits

Sub-Matrix: **SOLID**

		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2531506**

Page : 1 of 6

Client : **AECOM AUSTRALIA PTY LTD**

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : ----

Telephone : +61 2 8784 8555

Project : NSW_0908_PFASOMP_25

Date Samples Received : 09-Oct-2025

Order number : 60739111_1.12

Date Analysis Commenced : 10-Oct-2025

C-O-C number : 89411

Issue Date : 14-Oct-2025

Sampler : [REDACTED]

Site : Offsite 1 additional

Quote number : NSW_PFASOMP_25

No. of samples received : 3

No. of samples analysed : 1



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]
[REDACTED]

Organic Chemist
Organic Chemist

Sydney Inorganics, Smithfield, NSW
Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6922542)									
ES2531035-055	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	17.0	16.8	0.6	0% - 50%
ES2531606-003	Anonymous	EA055: Moisture Content	----	0.1	%	19.2	20.4	5.7	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6921463)									
ES2531509-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0029	0.0026	11.1	0% - 50%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6921463)									
ES2531509-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0002	0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0004	0.0004	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDODA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6921463) - continued									
ES2531509-001	Anonymous	EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6921463)									
ES2531509-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6921463)									
ES2531509-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6921463)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	97.9	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.2	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.8	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	90.3	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.8	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.5	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.2	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6921463)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	91.5	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.5	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.5	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	88.1	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	76.8	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	69.0	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	70.8	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6921463)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	110	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	114	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	91.4	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.4	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit			Result	LCS	Low
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6921463)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	108	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	107	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	121	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	113	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6921463)							
ES2531509-001	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	91.2	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	79.2	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	98.1	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	107	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	91.3	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	83.0	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	90.2	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	90.7	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6921463)							
ES2531509-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	90.2	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	108	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	105	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	116	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	89.0	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	82.9	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	121	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	83.2	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	70.4	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	72.0	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6921463)							
ES2531509-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	107	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	119	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	113	69.8	131



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6921463) - continued							
ES2531509-001	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	108	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	116	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	87.3	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	114	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6921463)							
ES2531509-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	112	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	128	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	116	69.2	143



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2531506	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 09-Oct-2025
Site	: Offsite 1 additional	Issue Date	: 14-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 3
Order number	: 60739111_1.12	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_OTH095_251009	09-Oct-2025	----	----	----	11-Oct-2025	23-Oct-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_OTH095_251009	09-Oct-2025	10-Oct-2025	07-Apr-2026	✓	14-Oct-2025	19-Nov-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_OTH095_251009	09-Oct-2025	10-Oct-2025	07-Apr-2026	✓	14-Oct-2025	19-Nov-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_OTH095_251009	09-Oct-2025	10-Oct-2025	07-Apr-2026	✓	14-Oct-2025	19-Nov-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_OTH095_251009	09-Oct-2025	10-Oct-2025	07-Apr-2026	✓	14-Oct-2025	19-Nov-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_OTH095_251009	09-Oct-2025	10-Oct-2025	07-Apr-2026	✓	14-Oct-2025	19-Nov-2025	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	9	11.11	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2531506**

Amendment : **1**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.2

C-O-C number : 89411

Site : Offsite 1 additional

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]

Telephone : +61 2 8784 8555

Facsimile : +61-2-8784 8500

Page : 1 of 4

Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 09-Oct-2025 16:14

Client Requested Due Date : 15-Oct-2025

Issue Date : 14-Oct-2025

Scheduled Reporting Date : **15-Oct-2025**

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : ----

Receipt Detail :

Security Seal : Not Available

Temperature : 4.5°C - Ice present

No. of samples received / analysed : 3 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- 14/10/25: This is an updated SRN to correct the report recipients and project task number.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) SOIL No analysis requested	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2531506-001	09-Oct-2025 15:07	0908_OTH095_251009		✓	✓
ES2531506-002	09-Oct-2025 15:07	0908_SD171_251009	✓		
ES2531506-003	09-Oct-2025 15:08	0908_SD170_251009	✓		

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]

Issue Date : 14-Oct-2025
Page : 4 of 4
Work Order : ES2531506 Amendment 1
Client : AECOM AUSTRALIA PTY LTD



- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email





Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
 Phone: (-)
 ALS Compass COC Reference: 89411 # Samples: 3 Sampler: [REDACTED]
 Phone: ([REDACTED])
 Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
 Free ice / frozen ice bricks upon receipt? YES NO N/A
 Random sample temperature on receipt? 4.5 °C

Custody:

Relinquished by: <u>[REDACTED]</u>	Received by: <u>[REDACTED]</u>	Relinquished by: <u>[REDACTED]</u>	Received by: <u>[REDACTED]</u>
Date / Time: <u>1614 9/10/25</u>	Date / Time: <u>1614 9/10</u>	Date / Time: <u>1700 9/10</u>	Date / Time: <u>09/10/25 1930</u>



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532067

Amendment : 1

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.2

C-O-C number : 89620

Site : Offsite 1

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]

Telephone : +61 2 8784 8555

Facsimile : +61-2-8784 8500

Page : 1 of 3

Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 09-Oct-2025 19:30

Client Requested Due Date : 20-Oct-2025

Issue Date : 07-Nov-2025

Scheduled Reporting Date : 20-Oct-2025

Delivery Details

Mode of Delivery : Samples On Hand

No. of coolers/boxes : ----

Receipt Detail : Original receipt temperature =
4.5°C

Security Seal : Not Available

Temperature : ----

No. of samples received / analysed : 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- 06/11/2025: This is an updated SRN to include a temperature at receipt as per the original work order ES2531471.
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.
- This is a rebatch of ES2531471.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532067-001	09-Oct-2025 15:06	0908_MW139_251009	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]

REBATCH REQUEST

[illegible]

ENFM (202/0)

Fadi Soro

From: [REDACTED]
Sent: Tuesday, 14 October 2025 9:10 PM
To: Samples Sydney
Subject: FW: [EXTERNAL] - Amendments to WO's ES2531471 and ES2531506
Attachments: AECOM ES2531471.xlsm

Hi Team,
Please find attached a rebatch request as per the email request below for AECOM.
Please add a lab remark that this is a retest of the original sample ES2531471-001– lab to scrutinise results.
Thanks.

Kind regards,



right solutions.
right partner.

[REDACTED]
Client Services Manager, Environmental
Sydney, NSW

O: +61 2 8784 8555
D: +61 2 8784 8529

[REDACTED]
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com



I choose to work flexibly and send emails outside of my normal office hours. There is no expectation to respond to my emails outside of yours.



[EnviroMail 93 Australia](#) Re-release - Laboratory quality assurance/quality control
[EnviroMail 148 Australia](#) - Interpreting TOP Assay
[EnviroMail 149 Australia](#) - Net Zero commitments and roadmap
[EnviroMail 150 Australia](#) - Spotlight on emerging contaminants - Triclosan
[EnviroMail 151 Australia](#) - Expanding the scope of PFAS analysis in soils and waters
[EnviroMail 152 Australia](#) - Analysing Air & Gas with Canisters

From: [REDACTED]
Sent: Tuesday, 14 October 2025 4:44 PM
To: [REDACTED]
Cc: [REDACTED]
Subject: [EXTERNAL] - Amendments to WO's ES2531471 and ES2531506

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hi ALS Team,

I hope you're doing well. I was looking to make amendments to WO's ES2531471 and ES2531506, the amendments are as follows:

- Could both WO's have the project task updated from 1.12 to 1.10.2
- Could both WO's have the recipients list updated with the correct Lab sync email, derp.labreports@esdat.com.au should be updated to esdat+audef@esdatlabsync.net (We have updated this in compass so hopefully this is the last time we request this change from you guys 😊)
- Could both WO's have the recipients list updated so that the two lab sync emails (esdat+aecom-derp@esdatlabsync.net and esdat+audef@esdatlabsync.net) receive all deliverables. We've not had issues with this in the past but lately the Labsync emails are only receiving the ESdat EDI. Is there a way we can ensure the Labsync emails always receive the full list of deliverables?

- Could WO ES2531506 have the recipients list updated with the correct Lab sync email, esdat+aecom-au@esdatlabsync.net should be updated to esdat+aecom-derp@esdatlabsync.net (this has already been requested directly to Loren but adding here to make sure all amendments are addressed before re-issuing to save double handling)
- Could ES2531471 have sample ES2531471001 re-analysed for EP231X-LL. If this could be done as a re-batch that would be great (the extra cost of re-analysing is fine).

Sorry there are quite a few here! Very much appreciate your time in making these changes.

Kind Regards,

[REDACTED]

Environmental Scientist

[REDACTED]

AECOM
Level 8, 6 Stewart Avenue
Newcastle West NSW 2302
aecom.com

Delivering a better world



CERTIFICATE OF ANALYSIS

Work Order	: ES2532067	Page	: 1 of 5
Amendment	: 1		
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 09-Oct-2025 19:30
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 15-Oct-2025
C-O-C number	: 89620	Issue Date	: 07-Nov-2025 22:32
Sampler	: [REDACTED]		
Site	: Offsite 1		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- Amendment 05/11/2025: This report has been amended to correct the SRN and include a temperature at receipt. All analytical results are as per the previous report.
- This is a rebatch of ES2531471.



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0908_MW139_251009

Sampling date / time

09-Oct-2025 15:06

Compound

CAS Number

LOR

Unit

ES2532067-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0908_MW139_251009

Sampling date / time

09-Oct-2025 15:06

Compound

CAS Number

LOR

Unit

ES2532067-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	93.3	----	----	----	----
13C8-PFOA	----	0.002	%	102	----	----	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2532067**

Page : 1 of 4

Amendment : **1**

Client : **AECOM AUSTRALIA PTY LTD**

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : ----

Telephone : +61 2 8784 8555

Project : NSW_0908_PFASOMP_25

Date Samples Received : 09-Oct-2025

Order number : 60739111_1.10.2

Date Analysis Commenced : 15-Oct-2025

C-O-C number : 89620

Issue Date : 07-Nov-2025

Sampler : [REDACTED]

Site : Offsite 1

Quote number : NSW_PFASOMP_25

No. of samples received : 1

No. of samples analysed : 1



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

- **No Laboratory Duplicate (DUP) Results are required to be reported.**
-



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6932371)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	123	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	98.7	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	96.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	102	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	110	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	91.1	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	87.0	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6932371)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	98.4	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	93.7	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	99.6	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	102	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	106	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	102	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	103	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	90.0	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	78.7	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	77.7	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	102	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6932371)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	113	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	124	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	128	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	105	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	117	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	95.4	65.0	136



Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6932371) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	95.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6932371)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	99.9	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	101	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	116	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	76.5	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

- No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.



QA/QC Compliance Assessment to assist with Quality Review

Work Order : ES2532067

Page : 1 of 4

Amendment : 1

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Project : NSW_0908_PFASOMP_25

Site : Offsite 1

Sampler : [REDACTED]

Order number : 60739111_1.10.2

Laboratory : Environmental Division Sydney

Telephone : +61 2 8784 8555

Date Samples Received : 09-Oct-2025

Issue Date : 07-Nov-2025

No. of samples received : 1

No. of samples analysed : 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- NO Method Blank value outliers occur.
- NO Duplicate outliers occur.
- NO Laboratory Control outliers occur.
- NO Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- NO Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.



Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW139_251009	09-Oct-2025	15-Oct-2025	07-Apr-2026	✔	17-Oct-2025	07-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW139_251009	09-Oct-2025	15-Oct-2025	07-Apr-2026	✔	17-Oct-2025	07-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW139_251009	09-Oct-2025	15-Oct-2025	07-Apr-2026	✔	17-Oct-2025	07-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW139_251009	09-Oct-2025	15-Oct-2025	07-Apr-2026	✔	17-Oct-2025	07-Apr-2026	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW139_251009	09-Oct-2025	15-Oct-2025	07-Apr-2026	✔	17-Oct-2025	07-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	0	1	0.00	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	1	100.00	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	0	1	0.00	5.00	✖	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532657**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **LEVEL 21 420 GEORGE STREET
SYDNEY NSW, AUSTRALIA 2000**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**

C-O-C number : **89420**
Site : **Offsite 14**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012
(NSW_PFASOMP_25)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **20-Oct-2025 15:42**
Client Requested Due : **25-Oct-2025**
Date

Issue Date : **20-Oct-2025**
Scheduled Reporting Date : **24-Oct-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **----**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **1.7°C - Ice present**
No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2532657-001	20-Oct-2025 14:50	0908_MW177_251020	✓
ES2532657-002	20-Oct-2025 14:24	0908_MW220S_251020	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]

- A4 - AU Tax Invoice (INV)

Email

[REDACTED]

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]

[REDACTED]

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email

Email

Email

Email

Email

Email

Email

[REDACTED]



Telephone: +61-2-8794 8558

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
 Phone: ([REDACTED])
 ALS Compass COC Reference: 89420 # Samples: 2 Sampler: [REDACTED]
 Phone: ([REDACTED])
 Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
 Free ice/ frozen ice bricks upon receipt? YES NO N/A
 Random sample temperature on receipt? 1.7 °C

Custody:

Relinquished by: <u>[REDACTED]</u> <u>20/10/25</u> Date / Time: <u>1541</u>	Received by: <u>[REDACTED]</u> <u>20/10</u> Date / Time: <u>1542</u>	Relinquished by: <u>[REDACTED]</u> <u>20/10</u> Date / Time: <u>1700</u>	Received by: <u>[REDACTED]</u> <u>20/10</u> Date / Time: <u>19:30</u>
---	--	--	---



ALS Laboratory: ES Sydney
Environmental

DATE TIME:



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

Other comments:

Biohazard info:

Total Bottle Count: ALS: 8, Non ALS: 0



CERTIFICATE OF ANALYSIS

Work Order : **ES2532657**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **LEVEL 21 420 GEORGE STREET
SYDNEY NSW, AUSTRALIA 2000**
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89420**
Sampler : **[REDACTED]**
Site : **Offsite 14**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 6
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **20-Oct-2025 15:42**
Date Analysis Commenced : **21-Oct-2025**
Issue Date : **22-Oct-2025 17:44**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW177_251020	0908_MW220S_25102 0	----	----	----
Sampling date / time				20-Oct-2025 14:50	20-Oct-2025 14:24	----	----	----
Compound	CAS Number	LOR	Unit	ES2532657-001	ES2532657-002	-----	-----	-----
				Result	Result	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.03	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.11	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.10	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	1.08	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.10	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	6.30	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.10	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.08	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.34	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.04	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.10	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	----	----	----

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW177_251020	0908_MW220S_251020	----	----	----
Sampling date / time					20-Oct-2025 14:50	20-Oct-2025 14:24	----	----	----
Compound	CAS Number	LOR	Unit	ES2532657-001	ES2532657-002	-----	-----	-----	
				Result	Result	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	----	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	----	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	----	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	----	----	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.16	----	----	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	----	----	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	----	----	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	0.02	8.54	----	----	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.02	7.38	----	----	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.02	8.21	----	----	----	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW177_251020	0908_MW220S_251020	----	----	----
Sampling date / time					20-Oct-2025 14:50	20-Oct-2025 14:24	----	----	----
Compound	CAS Number	LOR	Unit		ES2532657-001	ES2532657-002	-----	-----	-----
				Result			----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		94.5	95.1	----	----	----
13C8-PFOA	----	0.02	%		94.4	98.3	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532657	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: LEVEL 21 420 GEORGE STREET SYDNEY NSW, AUSTRALIA 2000	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 20-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 21-Oct-2025
C-O-C number	: 89420	Issue Date	: 22-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 14		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: WATER

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6944021)									
ES2532657-001	0908_MW177_251020	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6944021)									
ES2532657-001	0908_MW177_251020	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6944021)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6944021) - continued									
ES2532657-001	0908_MW177_251020	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6944021)							
ES2532657-001	0908_MW177_251020	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6944021)									
ES2532657-001	0908_MW177_251020	EP231X: Sum of PFAS	----	0.01	µg/L	0.02	0.02	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6944021)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	114	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	96.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	87.0	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	95.4	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	97.4	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	106	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	97.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6944021)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	97.3	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	94.6	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	106	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	94.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	101	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	99.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	95.7	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	98.9	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	134
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	109	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	103	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	92.4	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6944021)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	106	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	114	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	104	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	102	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	107	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.7	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6944021) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	92.5	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6944021)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	89.9	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	96.4	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	106	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	91.0	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6944021)							
ES2532657-002	0908_MW220S_251020	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	108	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	107	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	79.3	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	# Not Determined	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	118	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	118	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	90.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6944021)							
ES2532657-002	0908_MW220S_251020	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	100	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	91.5	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	101	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	92.1	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	95.1	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	96.6	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	95.8	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	92.9	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	104	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.25 µg/L	106	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	104	71.0	132



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6944021) - continued							
ES2532657-002	0908_MW220S_251020	EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	91.9	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6944021)							
ES2532657-002	0908_MW220S_251020	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	97.3	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	122	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	104	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	101	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	109	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	95.8	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	91.5	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6944021)							
ES2532657-002	0908_MW220S_251020	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	81.8	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	83.8	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	97.1	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	80.8	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532657	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 20-Oct-2025
Site	: Offsite 14	Issue Date	: 22-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.2	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532657--002	0908_MW220S_251020	Perfluorohexane sulfonic acid (PFHxS)	355-46-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532657--002	0908_MW220S_251020	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type	Method	Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	10.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_MW177_251020,	0908_MW220S_251020	20-Oct-2025	21-Oct-2025	18-Apr-2026	✓	22-Oct-2025	18-Apr-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0908_MW177_251020,	0908_MW220S_251020	20-Oct-2025	21-Oct-2025	18-Apr-2026	✓	22-Oct-2025	18-Apr-2026	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0908_MW177_251020,	0908_MW220S_251020	20-Oct-2025	21-Oct-2025	18-Apr-2026	✓	22-Oct-2025	18-Apr-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_MW177_251020,	0908_MW220S_251020	20-Oct-2025	21-Oct-2025	18-Apr-2026	✓	22-Oct-2025	18-Apr-2026	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0908_MW177_251020,	0908_MW220S_251020	20-Oct-2025	21-Oct-2025	18-Apr-2026	✔	22-Oct-2025	18-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	10.00	✖	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	13	7.69	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532693**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**

C-O-C number : **202510_0908_OMP_MW_ALS**
Site : **Williamtown**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield**
NSW Australia 2164

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 4**
Quote number : **ES2024AECOMAU0012**
(NSW_PFASOMP_25)
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **16-Oct-2025 14:10**
Client Requested Due : **27-Oct-2025**
Date

Issue Date : **22-Oct-2025**
Scheduled Reporting Date : **27-Oct-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.0°C - Ice present**
No. of samples received / analysed : **67 / 66**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- [22/10] This is an updated SRN which indicates the updated analysis for samples #66 & 67
- Sample #66 & 67 were received as extra samples.
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	(On Hold) WATER No analysis requested	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532693-001	07-Oct-2025 10:43	0908_MW264S_251007			✓
ES2532693-002	07-Oct-2025 10:47	0908_MW264D_251007			✓
ES2532693-003	07-Oct-2025 12:31	0908_MW829_251007		✓	
ES2532693-004	08-Oct-2025 09:34	0908_MW160_251008			✓
ES2532693-005	08-Oct-2025 09:52	0908_MW132D_251008		✓	
ES2532693-006	08-Oct-2025 09:53	0908_QC104_251008		✓	
ES2532693-007	08-Oct-2025 09:59	0908_MW132I_251008		✓	
ES2532693-008	08-Oct-2025 10:41	0908_MW247S_251008		✓	
ES2532693-009	08-Oct-2025 10:46	0908_MW247D_251008		✓	
ES2532693-010	08-Oct-2025 11:28	0908_MW178_251008		✓	
ES2532693-011	08-Oct-2025 12:36	0908_MW241S_251008			✓
ES2532693-012	08-Oct-2025 12:39	0908_QC105_251008			✓
ES2532693-013	08-Oct-2025 12:44	0908_MW241D_251008			✓
ES2532693-014	08-Oct-2025 14:49	0908_MW128S_251008			✓
ES2532693-015	08-Oct-2025 14:55	0908_MW128D_251008			✓
ES2532693-016	08-Oct-2025 15:06	0908_MW279S_251008		✓	
ES2532693-017	08-Oct-2025 15:32	0908_MW106S_251008		✓	
ES2532693-018	08-Oct-2025 15:36	0908_MW106D_251008		✓	
ES2532693-019	09-Oct-2025 08:31	0908_MW240D_251009			✓
ES2532693-020	09-Oct-2025 08:39	0908_MW282S_251009		✓	
ES2532693-021	09-Oct-2025 08:49	0908_MW329_251009		✓	
ES2532693-022	09-Oct-2025 08:55	0908_MW281S_251009		✓	
ES2532693-023	09-Oct-2025 09:15	0908_MW344D_251009		✓	
ES2532693-024	09-Oct-2025 09:26	0908_MW344S_251009		✓	
ES2532693-025	09-Oct-2025 09:50	0908_MW342D_251009		✓	
ES2532693-026	09-Oct-2025 09:52	0908_QC106_251009		✓	
ES2532693-027	09-Oct-2025 10:01	0908_MW354S_251009		✓	
ES2532693-028	09-Oct-2025 10:11	0908_MW340D_251009		✓	
ES2532693-029	09-Oct-2025 10:15	0908_MW340S_251009			✓
ES2532693-030	09-Oct-2025 10:38	0908_MW172_251009		✓	
ES2532693-031	09-Oct-2025 11:06	0908_MW108S_251009		✓	
ES2532693-032	09-Oct-2025 11:23	0908_MW175D_251009		✓	
ES2532693-033	09-Oct-2025 11:32	0908_MW466_251009		✓	
ES2532693-034	09-Oct-2025 11:41	0908_MW468_251009		✓	
ES2532693-035	09-Oct-2025 12:06	0908_MW109D_251009		✓	



			(On Hold) WATER No analysis requested	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532693-036	09-Oct-2025 14:30	0908_MW126S_251009		✓	
ES2532693-037	09-Oct-2025 14:35	0908_QC302_251009			✓
ES2532693-038	09-Oct-2025 14:35	0908_MW126D_251009			✓
ES2532693-039	10-Oct-2025 08:49	0908_MW166_251010		✓	
ES2532693-040	10-Oct-2025 08:59	0908_MW167_251010		✓	
ES2532693-041	10-Oct-2025 09:00	0908_QC108_251010		✓	
ES2532693-042	10-Oct-2025 09:10	0908_MW168_251010		✓	
ES2532693-043	10-Oct-2025 09:25	0908_MW169S_251010		✓	
ES2532693-044	10-Oct-2025 09:29	0908_MW169D_251010		✓	
ES2532693-045	10-Oct-2025 09:29	0908_QC109_251010	✓		
ES2532693-046	10-Oct-2025 09:45	0908_MW108D_251010			✓
ES2532693-047	10-Oct-2025 10:59	0908_QC110_251010			✓
ES2532693-048	10-Oct-2025 10:59	0908_MW278D_251010			✓
ES2532693-049	10-Oct-2025 11:03	0908_MW278S_251010			✓
ES2532693-050	10-Oct-2025 11:23	0908_MW125S_251010			✓
ES2532693-051	10-Oct-2025 11:24	0908_QC111_251010			✓
ES2532693-052	10-Oct-2025 11:42	0908_MW137_251010			✓
ES2532693-053	10-Oct-2025 12:11	0908_MW146S_251010			✓
ES2532693-054	10-Oct-2025 12:15	0908_MW146AD_251010			✓
ES2532693-055	10-Oct-2025 12:16	0908_QC112_251010			✓
ES2532693-056	10-Oct-2025 12:39	0908_MW232D_251010			✓
ES2532693-057	10-Oct-2025 12:49	0908_MW232S_251010			✓
ES2532693-058	10-Oct-2025 13:10	0908_MW731D_251010		✓	
ES2532693-059	10-Oct-2025 13:15	0908_MW731S_251010		✓	
ES2532693-060	10-Oct-2025 13:16	0908_QC303_251010			✓
ES2532693-061	13-Oct-2025 11:29	0908_MW125D_251013			✓
ES2532693-062	13-Oct-2025 11:31	0908_QC304_251013			✓
ES2532693-063	14-Oct-2025 11:20	0908_QC305_251014			✓
ES2532693-064	15-Oct-2025 13:39	0908_QC306_251015			✓
ES2532693-065	16-Oct-2025 11:54	0908_QC307_251016			✓
ES2532693-066	[07-Oct-2025]	0908_QC300_251007			✓
ES2532693-067	[08-Oct-2025]	0908_QC301_251008			✓

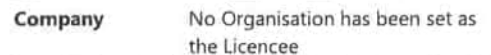
Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]



Project Name	PFASOMP: RAAF Base Williamtown 2025
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Request / Version 1/1

Lab Contact

Contact

Attention

Telephone : - 61-2-8784 8555

Rec: [REDACTED] 20/10/28 15/10.

TURNAROUND REQUEST: 5 DAYS SPECIAL INSTRUCTIONS: ADDITIONALLY, ISSUE LAB REPORTS (ESDAT EDDs AND PDF REPORT) TO SAMPLED BY:			CONTAINERS	EP231X:PFAS - Full Suite (31 analytes)	EP231X-LL:PFAS - Full Suite (31 analytes) Low Level												Hold	COMMENTS
FIELD ID	MATRIX	DATE																
60 0908_QC303_251010	Water	10 Oct 2025 01:16PM	4		✓													
61 0908_MW125D_251013	Water	13 Oct 2025 11:29AM	4		✓													
62 0908_QC304_251013	Water	13 Oct 2025 11:31AM	4		✓													
63 0908_QC305_251014	Water	14 Oct 2025 11:20AM	4		✓													
64 0908_QC306_251015	Water	15 Oct 2025 01:39PM	4		✓													
65 0908_QC307_251016	Water	16 Oct 2025 11:54AM	4		✓													

Hand Over	Relinquished	Received	Relinquished	Received	e-Request Sent
# of Delivery Boxes 4	Signature				Name -
Cooled Yes	Name Brooke Young				Org -
Con Note -	Org -				Date -
	Date 16 Oct 2025 02:18PM				

Information on the printed and signed COC takes precedence over the electronic copy

66 0908-QC300-251007 } received as extra samples
67 0908-QC301-251008

SAMPLES	CONTAINER DETAILS	
FIELD ID	HDPE (No PTFE) None	
	20 mL	
0908_MW172_251009		4
0908_MW108S_251009		4
0908_MW175D_251009		4
0908_MW466_251009		4
0908_MW468_251009		4
0908_MW109D_251009		4
0908_MW126S_251009		4
0908_QC302_251009		4
0908_MW126D_251009		4
0908_MW166_251010		4
0908_MW167_251010		4
0908_QC108_251010		4
0908_MW168_251010		4
0908_MW169S_251010		4
0908_MW169D_251010		4
0908_QC109_251010		4
0908_MW108D_251010		4
0908_QC110_251010		4
0908_MW278D_251010		4
0908_MW278S_251010		4
0908_MW125S_251010		4
0908_QC111_251010		4
0908_MW137_251010		4
0908_MW146S_251010		4
0908_MW146AD_251010		4
0908_QC112_251010		4
0908_MW232D_251010		4
0908_MW232S_251010		4
0908_MW731D_251010		4
0908_MW731S_251010		4
0908_QC303_251010		4
0908_MW125D_251013		4
0908_QC304_251013		4
0908_QC305_251014		4
0908_QC306_251015		4
0908_QC307_251016		4

Container Details

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW108D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023099
0908_MW108D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023325
0908_MW108S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038184
0908_MW108S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038064
0908_MW108S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038209
0908_MW108S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038049
0908_MW109D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023076
0908_MW109D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023072
0908_MW109D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023011
0908_MW109D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504030595

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW126D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023236
0908_MW126D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023162
0908_MW126S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023305
0908_MW126S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023259
0908_MW126S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504030573
0908_MW126S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023163
0908_MW128D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038037
0908_MW128D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038121
0908_MW128D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038205
0908_MW128D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038128

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW132I_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038166
0908_MW132I_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038047
0908_MW137_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023156
0908_MW137_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023232
0908_MW137_251010	Grey	HDPE (no PTFE)			20 mL	 00352504030560
0908_MW137_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023248
0908_MW146AD_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023246
0908_MW146AD_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023226
0908_MW146AD_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023032
0908_MW146AD_251010	Grey	HDPE (no PTFE)			20 mL	 00352504022981

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW166_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023117
0908_MW166_251010	Grey	HDPE (no PTFE)			20 mL	 00352504022963
0908_MW167_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023084
0908_MW167_251010	Grey	HDPE (no PTFE)			20 mL	 00352504030610
0908_MW167_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023153
0908_MW167_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023244
0908_MW168_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023037
0908_MW168_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023131
0908_MW168_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023262
0908_MW168_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023001

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW172_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038203
0908_MW172_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038012
0908_MW175D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037963
0908_MW175D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037939
0908_MW175D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038181
0908_MW175D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038169
0908_MW178_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038092
0908_MW178_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038085
0908_MW178_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038143
0908_MW178_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038073

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW240D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038088
0908_MW240D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037986
0908_MW241D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038132
0908_MW241D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038001
0908_MW241D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504037960
0908_MW241D_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038062
0908_MW241S_251008	Grey	HDPE (no PTFE)			20 mL	 00352504037966
0908_MW241S_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038140
0908_MW241S_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038004
0908_MW241S_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038028

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW264D_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038019
0908_MW264D_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038185
0908_MW264S_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038135
0908_MW264S_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038206
0908_MW264S_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038123
0908_MW264S_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038154
0908_MW278D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023137
0908_MW278D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023276
0908_MW278D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504030580
0908_MW278D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023208

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW281S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038157
0908_MW281S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038056
0908_MW282S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037948
0908_MW282S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038122
0908_MW282S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037945
0908_MW282S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037943
0908_MW329_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038098
0908_MW329_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037957
0908_MW329_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038129
0908_MW329_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038076

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW342D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038131
0908_MW342D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038138
0908_MW344D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038163
0908_MW344D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037942
0908_MW344D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038214
0908_MW344D_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038127
0908_MW344S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038150
0908_MW344S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504037987
0908_MW344S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038008
0908_MW344S_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038023

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_MW468_251009	Grey	HDPE (no PTFE)			20 mL	 00352504022965
0908_MW468_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023097
0908_MW731D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023194
0908_MW731D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504030568
0908_MW731D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023047
0908_MW731D_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023250
0908_MW731S_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023256
0908_MW731S_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023229
0908_MW731S_251010	Grey	HDPE (no PTFE)			20 mL	 00352504026602
0908_MW731S_251010	Grey	HDPE (no PTFE)			20 mL	 00352504016049

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC105_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038079
0908_QC106_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038017
0908_QC106_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038198
0908_QC106_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038172
0908_QC106_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038188
0908_QC108_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023013
0908_QC108_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023012
0908_QC108_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023284
0908_QC108_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023211
0908_QC109_251010	Grey	HDPE (no PTFE)			20 mL	 00352504026623

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC111_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023312
0908_QC112_251010	Grey	HDPE (no PTFE)			20 mL	 00352504022957
0908_QC112_251010	Grey	HDPE (no PTFE)			20 mL	 00352504022958
0908_QC112_251010	Grey	HDPE (no PTFE)			20 mL	 00352504030590
0908_QC112_251010	Grey	HDPE (no PTFE)			20 mL	 00352504023317
0908_QC302_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023068
0908_QC302_251009	Grey	HDPE (no PTFE)			20 mL	 00352504022980
0908_QC302_251009	Grey	HDPE (no PTFE)			20 mL	 00352504030579
0908_QC302_251009	Grey	HDPE (no PTFE)			20 mL	 00352504022955
0908_QC303_251010	Grey	HDPE (no PTFE)			20 mL	 00352504022969

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC305_251014	Grey	HDPE (no PTFE)			20 mL	 00350821001280
0908_QC306_251015	Grey	HDPE (no PTFE)			20 mL	 00352504023214
0908_QC306_251015	Grey	HDPE (no PTFE)			20 mL	 00352504022983
0908_QC306_251015	Grey	HDPE (no PTFE)			20 mL	 00352504022987
0908_QC306_251015	Grey	HDPE (no PTFE)			20 mL	 00352504023258
0908_QC307_251016	Grey	HDPE (no PTFE)			20 mL	 00352504026662
0908_QC307_251016	Grey	HDPE (no PTFE)			20 mL	 00352504026704
0908_QC307_251016	Grey	HDPE (no PTFE)			20 mL	 00352504026652
0908_QC307_251016	Grey	HDPE (no PTFE)			20 mL	 00352504026640

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: ESdat EOC x3 # Samples: Phone: ([REDACTED])
Turnaround Requirements: Standard Urgent Sampler: [REDACTED]
Phone: ([REDACTED])

Special Instructions:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3.0 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> <u>16/10</u> Date / Time: <u>1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10</u> <u>1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1522</u>
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CERTIFICATE OF ANALYSIS

Work Order : **ES2532693**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **202510_0908_OMP_MW_ALS**
Sampler : **[REDACTED]**
Site : **Williamtown**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **67**
No. of samples analysed : **66**

Page : 1 of 46
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **21-Oct-2025**
Issue Date : **27-Oct-2025 15:31**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW264S_25100 7	0908_MW264D_25100 7	0908_MW829_251007	0908_MW160_251008	0908_MW132D_25100 8
Sampling date / time				07-Oct-2025 10:43	07-Oct-2025 10:47	07-Oct-2025 12:31	08-Oct-2025 09:34	08-Oct-2025 09:52
Compound	CAS Number	LOR	Unit	ES2532693-001	ES2532693-002	ES2532693-003	ES2532693-004	ES2532693-005
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	----	<0.01	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.003	<0.002	----	0.004	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	----	0.11	----	0.07
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	----	0.019	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	----	0.35	----	0.16
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	----	<0.02	----	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	----	<0.01	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	----	<0.1	----	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	----	<0.002	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW264S_25100 7	0908_MW264D_25100 7	0908_MW829_251007	0908_MW160_251008	0908_MW132D_25100 8
Sampling date / time				07-Oct-2025 10:43	07-Oct-2025 10:47	07-Oct-2025 12:31	08-Oct-2025 09:34	08-Oct-2025 09:52
Compound	CAS Number	LOR	Unit	ES2532693-001	ES2532693-002	ES2532693-003	ES2532693-004	ES2532693-005
				Result	Result	Result	Result	Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	----	<0.02	----	0.03
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	----	<0.01	----	0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	----	<0.02	----	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	<0.005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	----	<0.05	----	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	<0.005	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	----	<0.05	----	<0.05

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW264S_25100 7	0908_MW264D_25100 7	0908_MW829_251007	0908_MW160_251008	0908_MW132D_25100 8
Sampling date / time				07-Oct-2025 10:43	07-Oct-2025 10:47	07-Oct-2025 12:31	08-Oct-2025 09:34	08-Oct-2025 09:52
Compound	CAS Number	LOR	Unit	ES2532693-001	ES2532693-002	ES2532693-003	ES2532693-004	ES2532693-005
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	<0.002	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	----	<0.02	----	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	<0.005	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	----	<0.05	----	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	<0.005	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	----	<0.05	----	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	<0.005	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	----	<0.05	----	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	<0.005	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	----	<0.05	----	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	<0.002	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	----	<0.02	----	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	<0.002	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	----	<0.02	----	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	<0.005	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW264S_25100 7	0908_MW264D_25100 7	0908_MW829_251007	0908_MW160_251008	0908_MW132D_25100 8
Sampling date / time				07-Oct-2025 10:43	07-Oct-2025 10:47	07-Oct-2025 12:31	08-Oct-2025 09:34	08-Oct-2025 09:52
Compound	CAS Number	LOR	Unit	ES2532693-001	ES2532693-002	ES2532693-003	ES2532693-004	ES2532693-005
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	----	<0.05	----	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	<0.005	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	----	<0.05	----	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	<0.005	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	----	<0.05	----	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	<0.005	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	----	<0.05	----	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.003	<0.002	----	0.023	----
Sum of PFAS	----	0.01	µg/L	----	----	0.46	----	0.27
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.003	<0.002	----	0.023	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	----	0.46	----	0.23
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.003	<0.002	----	0.023	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	----	0.46	----	0.27
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	111	100	----	120	----
13C4-PFOS	----	0.02	%	----	----	105	----	97.3
13C8-PFOA	----	0.002	%	94.6	98.4	----	97.6	----
13C8-PFOA	----	0.02	%	----	----	97.0	----	95.2



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC104_251008	0908_MW132I_25100 8	0908_MW247S_25100 8	0908_MW247D_25100 8	0908_MW178_251008
Sampling date / time				08-Oct-2025 09:53	08-Oct-2025 09:59	08-Oct-2025 10:41	08-Oct-2025 10:46	08-Oct-2025 11:28	
Compound	CAS Number	LOR	Unit	ES2532693-006	ES2532693-007	ES2532693-008	ES2532693-009	ES2532693-010	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.11	<0.01	0.34	<0.01	0.01	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.28	<0.01	0.20	<0.01	0.02	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	<0.02	0.02	<0.02	<0.02	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC104_251008	0908_MW132I_251008	0908_MW247S_251008	0908_MW247D_251008	0908_MW178_251008
					8	8	8	8	
Sampling date / time				08-Oct-2025 09:53	08-Oct-2025 09:59	08-Oct-2025 10:41	08-Oct-2025 10:46	08-Oct-2025 11:28	
Compound	CAS Number	LOR	Unit	ES2532693-006	ES2532693-007	ES2532693-008	ES2532693-009	ES2532693-010	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	0.42	<0.01	0.56	<0.01	0.03	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.39	<0.01	0.54	<0.01	0.03	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.42	<0.01	0.56	<0.01	0.03	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC104_251008	0908_MW132I_25100 8	0908_MW247S_25100 8	0908_MW247D_25100 8	0908_MW178_251008
Sampling date / time					08-Oct-2025 09:53	08-Oct-2025 09:59	08-Oct-2025 10:41	08-Oct-2025 10:46	08-Oct-2025 11:28
Compound	CAS Number	LOR	Unit	ES2532693-006	ES2532693-007	ES2532693-008	ES2532693-009	ES2532693-010	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%	108	101	108	101	102	
13C8-PFOA	----	0.02	%	99.2	94.5	96.4	94.7	98.4	

Sub-Matrix: WATER
(Matrix: WATER)

0908_MW241S_25100

0908_QC105_251008

0908_MW241D_25100

0908_MW128S_25100

0908_MW128D_25100

Sampling date / time

08-Oct-2025 12:36

08-Oct-2025 12:39

08-Oct-2025 12:44

08-Oct-2025 14:49

08-Oct-2025 14:55

[illegible]

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.002	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.009	0.013	<0.002	0.023	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.004	<0.002	0.004	0.008	0.002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW241S_25100 8	0908_QC105_251008	0908_MW241D_25100 8	0908_MW128S_25100 8	0908_MW128D_25100 8
Sampling date / time					08-Oct-2025 12:36	08-Oct-2025 12:39	08-Oct-2025 12:44	08-Oct-2025 14:49	08-Oct-2025 14:55
Compound	CAS Number	LOR	Unit	ES2532693-011	ES2532693-012	ES2532693-013	ES2532693-014	ES2532693-015	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.013	0.015	0.004	0.031	0.002	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.013	0.013	0.004	0.031	0.002	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.013	0.013	0.004	0.031	0.002	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	114	98.7	107	117	98.0	
13C8-PFOA	----	0.002	%	96.4	98.0	95.0	97.4	94.6	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW279S_25100 8	0908_MW106S_25100 8	0908_MW106D_25100 8	0908_MW240D_25100 9	0908_MW282S_25100 9
Sampling date / time				08-Oct-2025 15:06	08-Oct-2025 15:32	08-Oct-2025 15:36	09-Oct-2025 08:31	09-Oct-2025 08:39	
Compound	CAS Number	LOR	Unit	ES2532693-016	ES2532693-017	ES2532693-018	ES2532693-019	ES2532693-020	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	----	<0.01	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	----	0.006	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.03	<0.02	<0.02	----	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	<0.02	<0.02	----	<0.02	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	----	0.006	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	----	0.040	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	<0.02	<0.02	----	<0.02	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	----	<0.002	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.74	0.04	0.16	----	0.25	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.02	----	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	----	0.004	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.35	0.08	0.20	----	0.22	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	----	<0.002	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	----	<0.01	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	----	0.003	----	

Sub-Matrix: WATER
(Matrix: WATER)

0908_MW279S_25100 8	0908_MW106S_25100 8	0908_MW106D_25100 8	0908_MW240D_25100 9	0908_MW282S_25100 9
08-Oct-2025 15:06	08-Oct-2025 15:32	08-Oct-2025 15:36	09-Oct-2025 08:31	09-Oct-2025 08:39
ES2532693-016	ES2532693-017	ES2532693-018	ES2532693-019	ES2532693-020
Result	Result	Result	Result	Result

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	----	0.018	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.18	<0.02	0.02	----	0.03
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	----	<0.002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	----	0.005	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.01	----	<0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	----	<0.002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	----	<0.002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	----	<0.002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	----	<0.002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	----	<0.002	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	----	<0.005	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	----	<0.005	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW279S_25100 8	0908_MW106S_25100 8	0908_MW106D_25100 8	0908_MW240D_25100 9	0908_MW282S_25100 9
Sampling date / time					08-Oct-2025 15:06	08-Oct-2025 15:32	08-Oct-2025 15:36	09-Oct-2025 08:31	09-Oct-2025 08:39
Compound	CAS Number	LOR	Unit	ES2532693-016	ES2532693-017	ES2532693-018	ES2532693-019	ES2532693-020	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	----	<0.002	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	----	<0.005	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	----	<0.005	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	----	<0.005	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	----	<0.005	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	----	<0.002	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	----	<0.002	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	----	<0.005	----	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW279S_25100 8	0908_MW106S_25100 8	0908_MW106D_25100 8	0908_MW240D_25100 9	0908_MW282S_25100 9
Sampling date / time					08-Oct-2025 15:06	08-Oct-2025 15:32	08-Oct-2025 15:36	09-Oct-2025 08:31	09-Oct-2025 08:39
Compound	CAS Number	LOR	Unit	ES2532693-016	ES2532693-017	ES2532693-018	ES2532693-019	ES2532693-020	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	----	<0.005	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	----	<0.005	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	----	<0.005	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	----	----	----	0.082	----	
Sum of PFAS	----	0.01	µg/L	1.43	0.12	0.41	----	0.50	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	----	0.044	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	1.09	0.12	0.36	----	0.47	
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	----	0.076	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	1.33	0.12	0.39	----	0.50	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	----	----	----	113	----	
13C4-PFOS	----	0.02	%	104	98.6	105	----	103	
13C8-PFOA	----	0.002	%	----	----	----	96.0	----	
13C8-PFOA	----	0.02	%	98.6	96.1	98.4	----	92.6	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW329_251009	0908_MW281S_251009	0908_MW344D_251009	0908_MW344S_251009	0908_MW342D_251009
Sampling date / time				09-Oct-2025 08:49	09-Oct-2025 08:55	09-Oct-2025 09:15	09-Oct-2025 09:26	09-Oct-2025 09:50	
Compound	CAS Number	LOR	Unit	ES2532693-021	ES2532693-022	ES2532693-023	ES2532693-024	ES2532693-025	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.04	<0.02	<0.02	0.04	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.13	0.15	0.03	<0.02	0.06	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.27	0.22	0.03	<0.02	0.06	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	5.94	2.27	0.29	0.12	0.30	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	1.01	0.86	<0.02	<0.02	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	30.2	26.8	0.03	0.16	0.01	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.03	<0.02	<0.02	<0.02	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.05	0.08	<0.02	0.10	<0.02	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.50	0.48	0.05	0.09	0.08	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.15	0.06	<0.02	0.04	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.78	0.45	0.03	0.01	<0.01	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW329_251009	0908_MW281S_251009	0908_MW344D_251009	0908_MW344S_251009	0908_MW342D_251009
Sampling date / time					09-Oct-2025 08:49	09-Oct-2025 08:55	09-Oct-2025 09:15	09-Oct-2025 09:26	09-Oct-2025 09:50
Compound	CAS Number	LOR	Unit	ES2532693-021	ES2532693-022	ES2532693-023	ES2532693-024	ES2532693-025	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	39.1	31.4	0.46	0.52	0.55	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	36.1	29.1	0.32	0.28	0.31	
Sum of PFAS (WA DER List)	----	0.01	µg/L	37.8	30.3	0.43	0.52	0.45	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW329_251009	0908_MW281S_251009	0908_MW344D_251009	0908_MW344S_251009	0908_MW342D_251009
						9	9	9	9
Sampling date / time					09-Oct-2025 08:49	09-Oct-2025 08:55	09-Oct-2025 09:15	09-Oct-2025 09:26	09-Oct-2025 09:50
Compound	CAS Number	LOR	Unit	ES2532693-021	ES2532693-022	ES2532693-023	ES2532693-024	ES2532693-025	
				Result	Result	Result	Result	Result	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%	99.2	108	100	103	97.4	
13C8-PFOA	----	0.02	%	96.4	93.9	99.6	98.0	98.5	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC106_251009	0908_MW354S_251009	0908_MW340D_251009	0908_MW340S_251009	0908_MW172_251009
Sampling date / time				09-Oct-2025 09:52	09-Oct-2025 10:01	09-Oct-2025 10:11	09-Oct-2025 10:15	09-Oct-2025 10:38	
Compound	CAS Number	LOR	Unit	ES2532693-026	ES2532693-027	ES2532693-028	ES2532693-029	ES2532693-030	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	----	<0.01	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	----	0.011	----	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.04	0.04	0.02	----	<0.02	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.08	0.15	0.06	----	0.08	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	----	0.022	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	----	0.089	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.28	0.04	----	0.10	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	----	<0.002	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.35	4.94	0.23	----	1.20	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	1.43	<0.02	----	<0.02	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	----	0.009	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.02	16.0	0.03	----	0.08	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	----	<0.002	----	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	----	<0.01	----	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	<0.1	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	----	0.005	----	

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC106_251009	0908_MW354S_25100 9	0908_MW340D_25100 9	0908_MW340S_25100 9	0908_MW172_251009
Sampling date / time					09-Oct-2025 09:52	09-Oct-2025 10:01	09-Oct-2025 10:11	09-Oct-2025 10:15	09-Oct-2025 10:38
Compound	CAS Number	LOR	Unit		ES2532693-026	ES2532693-027	ES2532693-028	ES2532693-029	ES2532693-030
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.07	<0.02	----	0.03	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	----	0.026	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.09	0.58	0.12	----	0.09	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	----	<0.002	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.18	<0.02	----	<0.02	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	----	<0.002	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.87	0.02	----	0.04	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	----	<0.002	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	----	<0.002	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	----	<0.002	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	----	<0.002	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	----	----	<0.002	----	
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	----	----	<0.005	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	----	<0.005	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC106_251009	0908_MW354S_25100 9	0908_MW340D_25100 9	0908_MW340S_25100 9	0908_MW172_251009
Sampling date / time					09-Oct-2025 09:52	09-Oct-2025 10:01	09-Oct-2025 10:11	09-Oct-2025 10:15	09-Oct-2025 10:38
Compound	CAS Number	LOR	Unit	ES2532693-026	ES2532693-027	ES2532693-028	ES2532693-029	ES2532693-030	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	----	<0.002	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	----	<0.005	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	----	<0.005	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	----	<0.005	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	----	<0.005	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	----	<0.002	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	----	<0.002	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	----	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	----	<0.005	----	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC106_251009	0908_MW354S_251009	0908_MW340D_251009	0908_MW340S_251009	0908_MW172_251009
Sampling date / time				09-Oct-2025 09:52	09-Oct-2025 10:01	09-Oct-2025 10:11	09-Oct-2025 10:15	09-Oct-2025 10:38	
Compound	CAS Number	LOR	Unit	ES2532693-026	ES2532693-027	ES2532693-028	ES2532693-029	ES2532693-030	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	----	<0.005	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	----	<0.005	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	----	<0.005	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	----	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	----	----	----	0.162	----	
Sum of PFAS	----	0.01	µg/L	0.65	24.5	0.52	----	1.62	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	----	0.098	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.37	20.9	0.26	----	1.28	
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	----	0.140	----	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.54	22.8	0.46	----	1.52	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	----	----	----	100	----	
13C4-PFOS	----	0.02	%	95.8	103	99.5	----	94.0	
13C8-PFOA	----	0.002	%	----	----	----	101	----	
13C8-PFOA	----	0.02	%	103	100	98.0	----	96.0	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW108S_25100 9	0908_MW175D_25100 9	0908_MW466_251009	0908_MW468_251009	0908_MW109D_25100 9
Sampling date / time				09-Oct-2025 11:06	09-Oct-2025 11:23	09-Oct-2025 11:32	09-Oct-2025 11:41	09-Oct-2025 12:06
Compound	CAS Number	LOR	Unit	ES2532693-031	ES2532693-032	ES2532693-033	ES2532693-034	ES2532693-035
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.06	0.03	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.05	0.16	0.08	0.05
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.07	0.20	0.10	0.07
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.35	0.85	2.89	2.04	1.07
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.04	0.14	0.22	0.05
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.45	2.80	10.0	14.4	3.73
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.09	0.10	0.03
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.03	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.08	0.19	0.12	0.08
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.04	0.26	0.59	0.31	0.19
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.04	0.10	0.07	0.04
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	0.08	0.21	0.24	0.10
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW108S_25100 9	0908_MW175D_25100 9	0908_MW466_251009	0908_MW468_251009	0908_MW109D_25100 9
Sampling date / time					09-Oct-2025 11:06	09-Oct-2025 11:23	09-Oct-2025 11:32	09-Oct-2025 11:41	09-Oct-2025 12:06
Compound	CAS Number	LOR	Unit		ES2532693-031	ES2532693-032	ES2532693-033	ES2532693-034	ES2532693-035
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		92.4	94.6	93.8	93.2	92.7
13C8-PFOA	----	0.02	%		95.4	95.4	93.9	97.6	95.4



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW126S_25100 9	0908_QC302_251009	0908_MW126D_25100 9	0908_MW166_251010	0908_MW167_251010
Sampling date / time				09-Oct-2025 14:30	09-Oct-2025 14:35	09-Oct-2025 14:35	10-Oct-2025 08:49	10-Oct-2025 08:59
Compound	CAS Number	LOR	Unit	ES2532693-036	ES2532693-037	ES2532693-038	ES2532693-039	ES2532693-040
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	<0.01	<0.01	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.38	----	----	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.64	----	----	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	<0.002	0.003	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.72	----	----	0.02	<0.02
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	7.96	----	----	0.51	0.32
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.82	----	----	0.02	0.03
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	<0.002	0.004	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	12.6	----	----	11.8	1.40
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	0.03	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	<0.01	<0.01	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.2	----	----	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	<0.002	0.004	----	----



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW126S_25100 9	0908_QC302_251009	0908_MW126D_25100 9	0908_MW166_251010	0908_MW167_251010
Sampling date / time				09-Oct-2025 14:30	09-Oct-2025 14:35	09-Oct-2025 14:35	10-Oct-2025 08:49	10-Oct-2025 08:59
Compound	CAS Number	LOR	Unit	ES2532693-036	ES2532693-037	ES2532693-038	ES2532693-039	ES2532693-040
				Result	Result	Result	Result	Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.28	----	----	<0.02	0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	1.61	----	----	0.06	0.06
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.20	----	----	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.44	----	----	0.03	0.03
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	----	<0.002	<0.002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	----	<0.005	<0.005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	<0.05	<0.05
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	<0.005	<0.005	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	----	----	<0.05	<0.05

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW126S_25100 9	0908_QC302_251009	0908_MW126D_25100 9	0908_MW166_251010	0908_MW167_251010
Sampling date / time					09-Oct-2025 14:30	09-Oct-2025 14:35	09-Oct-2025 14:35	10-Oct-2025 08:49	10-Oct-2025 08:59
Compound	CAS Number	LOR	Unit	ES2532693-036	ES2532693-037	ES2532693-038	ES2532693-039	ES2532693-040	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	<0.002	<0.002	----	----	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	<0.005	<0.005	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	----	----	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	<0.002	<0.002	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	<0.002	<0.002	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	----	----	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	<0.005	<0.005	----	----	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW126S_25100 9	0908_QC302_251009	0908_MW126D_25100 9	0908_MW166_251010	0908_MW167_251010
Sampling date / time				09-Oct-2025 14:30	09-Oct-2025 14:35	09-Oct-2025 14:35	10-Oct-2025 08:49	10-Oct-2025 08:59
Compound	CAS Number	LOR	Unit	ES2532693-036	ES2532693-037	ES2532693-038	ES2532693-039	ES2532693-040
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	----	----	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	<0.005	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	----	----	<0.05	<0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	<0.005	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	----	----	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	<0.005	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	----	----	<0.05	<0.05
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	----	<0.002	0.011	----	----
Sum of PFAS	----	0.01	µg/L	25.8	----	----	12.5	1.86
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	<0.002	0.007	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	20.6	----	----	12.3	1.72
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	<0.002	0.011	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	23.9	----	----	12.4	1.83
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	----	99.1	107	----	----
13C4-PFOS	----	0.02	%	93.4	----	----	93.8	96.9
13C8-PFOA	----	0.002	%	----	98.8	94.3	----	----
13C8-PFOA	----	0.02	%	95.0	----	----	98.0	93.5



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC108_251010	0908_MW168_251010	0908_MW169S_251010	0908_MW169D_251010	0908_MW108D_251010
Sampling date / time					10-Oct-2025 09:00	10-Oct-2025 09:10	10-Oct-2025 09:25	10-Oct-2025 09:29	10-Oct-2025 09:45
Compound	CAS Number	LOR	Unit	ES2532693-041	ES2532693-042	ES2532693-043	ES2532693-044	ES2532693-046	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	----	----	----	----	<0.01	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	----	----	----	----	0.024	
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.02	0.04	<0.02	<0.02	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	----	----	----	----	0.038	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	----	----	----	----	0.555	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	0.07	<0.02	<0.02	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	----	----	----	----	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.77	3.62	0.12	0.13	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.07	0.08	<0.02	<0.02	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	----	----	----	----	0.006	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	9.00	0.98	3.15	3.52	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	----	----	----	----	<0.002	
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.05	0.06	<0.02	<0.02	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	----	----	----	----	<0.01	
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	----	----	----	----	0.007	

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC108_251010	0908_MW168_251010	0908_MW169S_251010	0908_MW169D_251010	0908_MW108D_251010
					0	0	0	0	0
Sampling date / time				10-Oct-2025 09:00	10-Oct-2025 09:10	10-Oct-2025 09:25	10-Oct-2025 09:29	10-Oct-2025 09:45	
Compound		CAS Number	LOR	Unit	ES2532693-041	ES2532693-042	ES2532693-043	ES2532693-044	ES2532693-046
					Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.06	0.08	<0.02	<0.02	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	----	----	----	----	----	0.045
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.18	0.48	0.04	0.04	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	----	----	----	----	----	0.008
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.04	0.12	<0.02	<0.02	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	----	----	----	----	----	0.023
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.08	0.28	0.01	0.01	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	----	----	----	----	----	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	----	----	----	----	----	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	----	----	----	----	----	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	----	----	----	----	----	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	----	----	----	----	----	<0.002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.005	µg/L	----	----	----	----	----	<0.005
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	----	----	----	----	----	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC108_251010	0908_MW168_251010	0908_MW169S_251010 0	0908_MW169D_251010 0	0908_MW108D_251010 0
Sampling date / time					10-Oct-2025 09:00	10-Oct-2025 09:10	10-Oct-2025 09:25	10-Oct-2025 09:29	10-Oct-2025 09:45
Compound	CAS Number	LOR	Unit	ES2532693-041	ES2532693-042	ES2532693-043	ES2532693-044	ES2532693-046	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	----	----	----	----	<0.002	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	----	----	----	----	<0.005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	----	----	----	----	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	----	----	----	----	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	----	----	----	----	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	----	----	----	----	<0.002	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	----	----	----	----	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	----	----	----	----	<0.005	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC108_251010	0908_MW168_251010	0908_MW169S_251010 0	0908_MW169D_251010 0	0908_MW108D_251010 0
Sampling date / time				10-Oct-2025 09:00	10-Oct-2025 09:10	10-Oct-2025 09:25	10-Oct-2025 09:29	10-Oct-2025 09:45	
Compound	CAS Number	LOR	Unit	ES2532693-041	ES2532693-042	ES2532693-043	ES2532693-044	ES2532693-046	
				Result	Result	Result	Result	Result	
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	----	----	----	----	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	----	----	----	----	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	----	----	----	----	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	----	----	----	----	0.706	
Sum of PFAS	----	0.01	µg/L	10.3	5.81	3.32	3.70	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	----	----	----	----	0.561	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	9.77	4.60	3.27	3.65	----	
Sum of PFAS (WA DER List)	----	0.002	µg/L	----	----	----	----	0.668	
Sum of PFAS (WA DER List)	----	0.01	µg/L	10.2	5.60	3.32	3.70	----	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	----	----	----	----	97.5	
13C4-PFOS	----	0.02	%	92.8	92.2	90.3	92.5	----	
13C8-PFOA	----	0.002	%	----	----	----	----	99.6	
13C8-PFOA	----	0.02	%	93.2	93.6	93.2	93.3	----	

Sub-Matrix: WATER
(Matrix: WATER)

0908 QC110 251010

0908_MW278D_25101

0908_MW278S_25101

0908_MW125S_25101

0908 QC111 251010

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC110_251010	0908_MW278D_25101 0	0908_MW278S_25101 0	0908_MW125S_25101 0	0908_QC111_251010
Sampling date / time				10-Oct-2025 10:59	10-Oct-2025 10:59	10-Oct-2025 11:03	10-Oct-2025 11:23	10-Oct-2025 11:24	
Compound	CAS Number	LOR	Unit	ES2532693-047	ES2532693-048	ES2532693-049	ES2532693-050	ES2532693-051	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	0.016	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L	0.013	0.012	0.007	<0.002	0.018	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.013	0.012	0.007	<0.002	0.002	
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.013	0.012	0.007	<0.002	0.002	
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%	99.6	98.8	106	95.8	95.4	
13C8-PFOA	----	0.002	%	97.0	95.9	100	94.4	101	

Sub-Matrix: WATER
(Matrix: WATER)

0908_MW137_251010	0908_MW146S_251010	0908_MW146AD_251010	0908_QC112_251010	0908_MW232D_251010
10-Oct-2025 11:42	10-Oct-2025 12:11	10-Oct-2025 12:15	10-Oct-2025 12:16	10-Oct-2025 12:39
ES2532693-052	ES2532693-053	ES2532693-054	ES2532693-055	ES2532693-056
Result	Result	Result	Result	Result

EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.004	0.008	<0.002	<0.002	<0.002
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.003	0.013	0.004	0.002	<0.002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.004	<0.002	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.004	<0.002	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
EP231C: Perfluoroalkyl Sulfonamides								



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW137_251010	0908_MW146S_251010	0908_MW146AD_251010	0908_QC112_251010	0908_MW232D_251010
Sampling date / time				10-Oct-2025 11:42	10-Oct-2025 12:11	10-Oct-2025 12:15	10-Oct-2025 12:16	10-Oct-2025 12:39
Compound	CAS Number	LOR	Unit	ES2532693-052	ES2532693-053	ES2532693-054	ES2532693-055	ES2532693-056
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	0.008	<0.002	<0.002	<0.002	<0.002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.015	0.029	0.004	0.002	<0.002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.007	0.021	0.004	0.002	<0.002
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.007	0.029	0.004	0.002	<0.002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	108	83.7	89.1	83.4	85.6
13C8-PFOA	----	0.002	%	99.8	91.3	90.8	92.5	95.5



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW232S_25101 0	0908_MW731D_25101 0	0908_MW731S_25101 0	0908_QC303_251010 0	0908_MW125D_25101 3
Sampling date / time				10-Oct-2025 12:49	10-Oct-2025 13:10	10-Oct-2025 13:15	10-Oct-2025 13:16	13-Oct-2025 11:29
Compound	CAS Number	LOR	Unit	ES2532693-057	ES2532693-058	ES2532693-059	ES2532693-060	ES2532693-061
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	<0.01	<0.01
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	<0.02	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	0.03	0.03	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	<0.002	0.004
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	0.07	0.07	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	3.55	3.14	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	0.08	0.06	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	<0.002	0.005
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	0.83	0.87	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	0.06	0.05	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	<0.01	<0.01
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	<0.002	<0.002



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW232S_25101 0	0908_MW731D_25101 0	0908_MW731S_25101 0	0908_QC303_251010 0	0908_MW125D_25101 3
Sampling date / time				10-Oct-2025 12:49	10-Oct-2025 13:10	10-Oct-2025 13:15	10-Oct-2025 13:16	13-Oct-2025 11:29
Compound	CAS Number	LOR	Unit	ES2532693-057	ES2532693-058	ES2532693-059	ES2532693-060	ES2532693-061
				Result	Result	Result	Result	Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	0.08	0.08	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	<0.002	0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	0.42	0.38	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	0.09	0.08	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	0.25	0.21	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	<0.002	<0.002
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	<0.005	<0.005
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	<0.05	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	<0.05	<0.05	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_MW232S_25101 0	0908_MW731D_25101 0	0908_MW731S_25101 0	0908_QC303_251010	0908_MW125D_25101 3
Sampling date / time					10-Oct-2025 12:49	10-Oct-2025 13:10	10-Oct-2025 13:15	10-Oct-2025 13:16	13-Oct-2025 11:29
Compound	CAS Number	LOR	Unit	ES2532693-057	ES2532693-058	ES2532693-059	ES2532693-060	ES2532693-061	
				Result	Result	Result	Result	Result	
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	<0.002	<0.002	
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	<0.02	----	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	<0.05	----	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	<0.005	<0.005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	<0.05	----	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	<0.005	<0.005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	<0.05	----	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	<0.005	0.006	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	<0.05	----	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	<0.002	<0.002	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	<0.02	----	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	<0.002	<0.002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	<0.02	----	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	<0.005	<0.005	



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_MW232S_25101 0	0908_MW731D_25101 0	0908_MW731S_25101 0	0908_QC303_251010	0908_MW125D_25101 3
Sampling date / time				10-Oct-2025 12:49	10-Oct-2025 13:10	10-Oct-2025 13:15	10-Oct-2025 13:16	13-Oct-2025 11:29
Compound	CAS Number	LOR	Unit	ES2532693-057	ES2532693-058	ES2532693-059	ES2532693-060	ES2532693-061
				Result	Result	Result	Result	Result
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	<0.05	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	<0.05	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	----	----	<0.002	0.017
Sum of PFAS	----	0.01	µg/L	----	5.48	4.97	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	<0.002	0.009
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	4.38	4.01	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	<0.002	0.011
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	5.25	4.79	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	80.4	----	----	86.0	84.9
13C4-PFOS	----	0.02	%	----	93.2	93.7	----	----
13C8-PFOA	----	0.002	%	91.8	----	----	94.9	96.0
13C8-PFOA	----	0.02	%	----	96.2	94.6	----	----

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC304_251013	0908_QC305_251014	0908_QC306_251015	0908_QC307_251016	0908_QC300_251007
Sampling date / time				13-Oct-2025 11:31	14-Oct-2025 11:20	15-Oct-2025 13:39	16-Oct-2025 11:54	[07-Oct-2025]	
Compound	CAS Number	LOR	Unit	ES2532693-062	ES2532693-063	ES2532693-064	ES2532693-065	ES2532693-066	
				Result	Result	Result	Result	Result	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002	
Perfluorotetradecanoic acid (PFTTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: WATER
(Matrix: WATER)

Sample ID

				0908_QC304_251013	0908_QC305_251014	0908_QC306_251015	0908_QC307_251016	0908_QC300_251007
Sampling date / time				13-Oct-2025 11:31	14-Oct-2025 11:20	15-Oct-2025 13:39	16-Oct-2025 11:54	[07-Oct-2025]
Compound	CAS Number	LOR	Unit	ES2532693-062	ES2532693-063	ES2532693-064	ES2532693-065	ES2532693-066
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	85.5	91.3	81.5	84.7	84.3
13C8-PFOA	----	0.002	%	95.1	92.8	95.5	94.6	95.2



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

0908_QC301_251008

Sampling date / time

[08-Oct-2025]

Compound

CAS Number

LOR

Unit

ES2532693-067

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_QC301_251008	----	----	----	----
Sampling date / time					[08-Oct-2025]	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2532693-067	-----	-----	-----	-----
				Result		----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L		<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L		<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L		<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L		<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L		<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L		<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L		<0.002	----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L		<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L		<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L		<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L		<0.005	----	----	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.002	µg/L		<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L		<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L		<0.002	----	----	----	----
EP231S: PFAS Surrogate									
13C4-PFOS	----	0.002	%		91.8	----	----	----	----
13C8-PFOA	----	0.002	%		93.1	----	----	----	----



Surrogate Control Limits

Sub-Matrix: **WATER**

		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532693	Page	: 1 of 26
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 21-Oct-2025
C-O-C number	: 202510_0908_OMP_MW_ALS	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Williamtown		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 67		
No. of samples analysed	: 66		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6945381)									
ES2532693-003	0908_MW829_251007	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.11	0.10	11.6	0% - 50%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.35	0.32	8.2	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2532693-020	0908_MW282S_251009	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.25	0.23	7.5	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.22	0.20	7.9	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6945382)									
ES2532693-001	0908_MW264S_251007	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6945382) - continued									
ES2532693-001	0908_MW264S_251007	EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.003	0.004	31.8	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532693-037	0908_QC302_251009	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6945385)									
ES2532693-030	0908_MW172_251009	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.20	1.20	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.08	0.09	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.10	0.11	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2532693-042	0908_MW168_251010	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	3.62	3.56	1.7	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.98	0.99	1.6	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.08	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.06	0.07	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6946562)									
ES2532693-053	0908_MW146S_251010	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.008	0.009	15.7	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.013	0.015	12.1	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532693-063	0908_QC305_251014	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.034	0.031	7.8	0% - 50%
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	0.009	0.008	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.080	0.084	5.0	0% - 20%
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	0.006	0.007	15.2	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.029	0.027	6.6	0% - 50%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	0.02	0.02	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.002	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949528) - continued									
ES2532717-004	Anonymous	EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.013	0.009	38.4	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.009	0.008	13.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6945381)									
ES2532693-003	0908_MW829_251007	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2532693-020	0908_MW282S_251009	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6945382)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6945382) - continued									
ES2532693-001	0908_MW264S_251007	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532693-037	0908_QC302_251009	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6945385)									
ES2532693-030	0908_MW172_251009	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.09	0.09	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6945385) - continued									
ES2532693-030	0908_MW172_251009	EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2532693-042	0908_MW168_251010	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.28	0.28	0.0	0% - 20%
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.08	0.09	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.48	0.48	0.0	0% - 20%
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.12	0.13	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6946562)							
ES2532693-053	0908_MW146S_251010	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.004	0.005	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.004	0.005	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532693-063	0908_QC305_251014	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6946562) - continued									
ES2532693-063	0908_QC305_251014	EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.275	0.284	3.4	0% - 20%
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.708	0.723	2.0	0% - 20%
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	0.068	0.070	2.0	0% - 20%
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.034	0.035	3.9	0% - 50%
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	0.002	0.003	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.12	0.12	0.0	0% - 50%
ES2532717-004	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945381)									
ES2532693-003	0908_MW829_251007	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945381) - continued									
ES2532693-003	0908_MW829_251007	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532693-020	0908_MW282S_251009	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945382)									
ES2532693-001	0908_MW264S_251007	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532693-037	0908_QC302_251009	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945382) - continued									
ES2532693-037	0908_QC302_251009	EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945385)									
ES2532693-030	0908_MW172_251009	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532693-042	0908_MW168_251010	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6946562)									
ES2532693-053	0908_MW146S_251010	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6946562) - continued									
ES2532693-053	0908_MW146S_251010	EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532693-063	0908_QC305_251014	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.012	144	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528)							
ES2532676-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		ES2532717-004	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9			0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528) - continued									
ES2532717-004	Anonymous	EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6945381)									
ES2532693-003	0908_MW829_251007	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532693-020	0908_MW282S_251009	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6945382)									
ES2532693-001	0908_MW264S_251007	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532693-037	0908_QC302_251009	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6945382) - continued									
ES2532693-037	0908_QC302_251009	EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6945385)									
ES2532693-030	0908_MW172_251009	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532693-042	0908_MW168_251010	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6946562)									
ES2532693-053	0908_MW146S_251010	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532693-063	0908_QC305_251014	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949528) - continued									
ES2532676-001	Anonymous	EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005 (0.008) *	µg/L	1.86	1.67	10.4	0% - 20%
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	0.016	0.018	9.9	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6945381)									
ES2532693-003	0908_MW829_251007	EP231X: Sum of PFAS	----	0.01	µg/L	0.46	0.42	9.1	0% - 20%
ES2532693-020	0908_MW282S_251009	EP231X: Sum of PFAS	----	0.01	µg/L	0.50	0.46	8.3	0% - 20%
EP231P: PFAS Sums (QC Lot: 6945385)									
ES2532693-030	0908_MW172_251009	EP231X: Sum of PFAS	----	0.01	µg/L	1.62	1.64	1.2	0% - 20%
ES2532693-042	0908_MW168_251010	EP231X: Sum of PFAS	----	0.01	µg/L	5.81	5.80	0.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945381)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	115	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	98.8	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	98.2	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	93.3	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	99.4	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	95.7	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	106	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	91.6	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945382)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	110	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	98.0	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	93.3	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	84.9	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	100	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	88.7	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	76.8	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945385)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	106	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	84.4	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	87.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	87.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	94.1	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	96.1	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	83.2	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	84.3	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6946562)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	120	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	99.3	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	111	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	107	68.0	131



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6946562) - continued								
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	112	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	108	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	85.3	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949528)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	119	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	98.0	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	128	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	120	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	114	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	77.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945381)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	92.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	98.2	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	103	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	103	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	104	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	108	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	92.7	69.0	133
EP231X: Perfluorododecanoic acid (PFDODA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	93.1	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	88.5	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	88.1	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	100	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945382)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	92.9	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	89.1	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	96.0	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	89.2	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	106	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	99.3	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	97.7	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	91.8	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDODA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	85.7	72.0	134



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945382) - continued								
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	85.7	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	83.7	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	105	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945385)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	95.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	92.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	96.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	92.7	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	120	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	113	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	114	72.0	134
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	120	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	87.4	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	88.4	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6946562)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	92.8	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	112	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	119	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	117	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	98.4	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	120	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	119	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	109	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	119	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	124	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	111	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	98.1	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	121	72.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528) - continued								
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	97.1	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	123	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	108	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	90.4	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	123	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	128	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	108	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945381)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	88.8	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	100	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	89.2	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	112	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	108	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	107	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	110	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945382)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	100	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	107	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	104	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	105	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	106	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	111	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945385)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	98.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	94.0	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	90.2	62.6	147



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945385) - continued								
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	104	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	104	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	107	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	91.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6946562)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	105	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	109	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	90.9	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	111	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	114	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	122	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	91.1	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	109	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	127	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	110	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	117	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	102	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945381)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	106	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	103	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	93.6	67.0	138



Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945381) - continued								
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	79.3	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945382)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	93.2	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	82.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	117	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	86.8	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945385)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	98.1	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	109	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	111	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	84.5	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6946562)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	92.3	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	79.2	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	76.4	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	76.3	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.5	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	77.2	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	77.8	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945381)							
ES2532693-005	0908_MW132D_251008	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	112	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	96.2	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.7	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	87.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	106	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	102	65.0	140



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945381) - continued							
ES2532693-005	0908_MW132D_251008	EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	122	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	87.9	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945382)							
ES2532693-002	0908_MW264D_251007	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	102	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	92.7	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	93.8	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	87.2	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	112	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	95.0	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	74.8	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945385)							
ES2532693-031	0908_MW108S_251009	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	110	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	87.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	96.6	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	111	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	97.4	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	122	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	89.8	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	83.0	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6946562)							
ES2532693-054	0908_MW146AD_251010	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	120	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	93.4	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	104	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	99.8	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	103	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	87.4	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	76.7	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	107	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	99.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	75.0	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	118	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	116	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	97.7	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945381)							
ES2532693-005	0908_MW132D_251008	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	86.6	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	84.7	72.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945381) - continued							
ES2532693-005	0908_MW132D_251008	EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	99.1	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	93.0	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	106	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	101	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	96.6	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	90.4	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	82.4	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	85.9	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	80.3	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	104	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945382)							
ES2532693-002	0908_MW264D_251007	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	82.7	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	75.5	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	93.4	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	83.1	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	97.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	97.9	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	94.1	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	87.7	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	83.5	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	74.8	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	73.0	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	114	65.6	133
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945385)					
ES2532693-031	0908_MW108S_251009	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	98.2	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	110	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	90.1	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	98.9	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	102	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	99.1	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	111	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	108	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	114	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	115	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	90.6	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	92.4	62.9	136
		EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6946562)					
ES2532693-054	0908_MW146AD_251010	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	83.7	73.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6946562) - continued							
ES2532693-054	0908_MW146AD_251010	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	104	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	103	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	103	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	92.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	110	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	105	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	102	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	79.2	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	107	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	117	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	96.0	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	92.1	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	122	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	94.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	116	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	87.4	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	106	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	77.7	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	104	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	110	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	99.8	65.6	133		
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945381)							
ES2532693-005	0908_MW132D_251008	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	110	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	126	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	115	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	121	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	125	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	105	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	119	61.0	135



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945382)							
ES2532693-002	0908_MW264D_251007	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	94.9	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	110	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	100	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	99.3	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	119	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	97.3	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	86.9	61.0	135
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945385)					
ES2532693-031	0908_MW108S_251009	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	102	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	97.7	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	95.2	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	114	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	108	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	109	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	94.5	61.0	135
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6946562)					
ES2532693-054	0908_MW146AD_251010	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	93.1	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	113	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	91.5	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	108	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	115	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	82.2	61.0	135



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	99.0	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	110	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	96.0	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	105	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	111	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	117	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	90.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945381)							
ES2532693-005	0908_MW132D_251008	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	106	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	120	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	114	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	84.9	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945382)							
ES2532693-002	0908_MW264D_251007	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	102	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	92.6	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	126	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	76.2	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945385)							
ES2532693-031	0908_MW108S_251009	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	101	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	123	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	117	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	94.2	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6946562)							
ES2532693-054	0908_MW146AD_251010	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	87.5	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	80.4	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	83.9	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	87.8	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	91.8	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	# Not Determined	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	86.9	67.0	138



Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528) - continued							
ES2532676-002	Anonymous	EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	81.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532693	Page	: 1 of 13
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Williamtown	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 67
Order number	: 60739111_1.10.2	No. of samples analysed	: 66

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluoropentanoic acid (PFPeA)	2706-90-3	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2532676--002	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_MW264S_251007, 0908_MW829_251007	0908_MW264D_251007,	07-Oct-2025	21-Oct-2025	05-Apr-2026	✔	23-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC300_251007		07-Oct-2025	23-Oct-2025	05-Apr-2026	✔	24-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW160_251008, 0908_QC104_251008, 0908_MW247S_251008, 0908_MW178_251008, 0908_QC105_251008, 0908_MW128S_251008, 0908_MW279S_251008, 0908_MW106D_251008	0908_MW132D_251008, 0908_MW132I_251008, 0908_MW247D_251008, 0908_MW241S_251008, 0908_MW241D_251008, 0908_MW128D_251008, 0908_MW106S_251008,	08-Oct-2025	21-Oct-2025	06-Apr-2026	✔	23-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC301_251008		08-Oct-2025	23-Oct-2025	06-Apr-2026	✔	24-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL)								



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids - Continued								
0908_MW240D_251009, 0908_MW329_251009, 0908_MW344D_251009, 0908_MW342D_251009, 0908_MW354S_251009, 0908_MW340S_251009, 0908_MW126D_251009	0908_MW282S_251009, 0908_MW281S_251009, 0908_MW344S_251009, 0908_QC106_251009, 0908_MW340D_251009, 0908_QC302_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✔	23-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW172_251009, 0908_MW175D_251009, 0908_MW468_251009, 0908_MW126S_251009	0908_MW108S_251009, 0908_MW466_251009, 0908_MW109D_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✔	27-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW108D_251010, 0908_MW278D_251010, 0908_MW125S_251010, 0908_MW137_251010	0908_QC110_251010, 0908_MW278S_251010, 0908_QC111_251010,	10-Oct-2025	21-Oct-2025	08-Apr-2026	✔	23-Oct-2025	08-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW166_251010, 0908_QC108_251010, 0908_MW169S_251010, 0908_MW731D_251010,	0908_MW167_251010, 0908_MW168_251010, 0908_MW169D_251010, 0908_MW731S_251010	10-Oct-2025	21-Oct-2025	08-Apr-2026	✔	27-Oct-2025	08-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW146S_251010, 0908_QC112_251010, 0908_MW232S_251010,	0908_MW146AD_251010, 0908_MW232D_251010, 0908_QC303_251010	10-Oct-2025	22-Oct-2025	08-Apr-2026	✔	24-Oct-2025	08-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW125D_251013,	0908_QC304_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC305_251014		14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC306_251015		15-Oct-2025	22-Oct-2025	13-Apr-2026	✔	24-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC307_251016		16-Oct-2025	22-Oct-2025	14-Apr-2026	✔	24-Oct-2025	14-Apr-2026	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0908_MW264S_251007, 0908_MW829_251007	0908_MW264D_251007,	07-Oct-2025	21-Oct-2025	05-Apr-2026	✓	23-Oct-2025	05-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC300_251007		07-Oct-2025	23-Oct-2025	05-Apr-2026	✓	24-Oct-2025	05-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_MW160_251008, 0908_QC104_251008, 0908_MW247S_251008, 0908_MW178_251008, 0908_QC105_251008, 0908_MW128S_251008, 0908_MW279S_251008, 0908_MW106D_251008	0908_MW132D_251008, 0908_MW132I_251008, 0908_MW247D_251008, 0908_MW241S_251008, 0908_MW241D_251008, 0908_MW128D_251008, 0908_MW106S_251008,	08-Oct-2025	21-Oct-2025	06-Apr-2026	✓	23-Oct-2025	06-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC301_251008		08-Oct-2025	23-Oct-2025	06-Apr-2026	✓	24-Oct-2025	06-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW240D_251009, 0908_MW329_251009, 0908_MW344D_251009, 0908_MW342D_251009, 0908_MW354S_251009, 0908_MW340S_251009, 0908_MW126D_251009	0908_MW282S_251009, 0908_MW281S_251009, 0908_MW344S_251009, 0908_QC106_251009, 0908_MW340D_251009, 0908_QC302_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✓	23-Oct-2025	07-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_MW172_251009, 0908_MW175D_251009, 0908_MW468_251009, 0908_MW126S_251009	0908_MW108S_251009, 0908_MW466_251009, 0908_MW109D_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✓	27-Oct-2025	07-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW108D_251010, 0908_MW278D_251010, 0908_MW125S_251010, 0908_MW137_251010	0908_QC110_251010, 0908_MW278S_251010, 0908_QC111_251010,	10-Oct-2025	21-Oct-2025	08-Apr-2026	✓	23-Oct-2025	08-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_MW166_251010, 0908_QC108_251010, 0908_MW169S_251010, 0908_MW731D_251010,	0908_MW167_251010, 0908_MW168_251010, 0908_MW169D_251010, 0908_MW731S_251010	10-Oct-2025	21-Oct-2025	08-Apr-2026	✓	27-Oct-2025	08-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW146S_251010, 0908_QC112_251010, 0908_MW232S_251010,	0908_MW146AD_251010, 0908_MW232D_251010, 0908_QC303_251010	10-Oct-2025	22-Oct-2025	08-Apr-2026	✓	24-Oct-2025	08-Apr-2026	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231B: Perfluoroalkyl Carboxylic Acids - Continued							
HDPE (no PTFE) (EP231X-LL) 0908_MW125D_251013, 0908_QC304_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC305_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC306_251015	15-Oct-2025	22-Oct-2025	13-Apr-2026	✔	24-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC307_251016	16-Oct-2025	22-Oct-2025	14-Apr-2026	✔	24-Oct-2025	14-Apr-2026	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0908_MW264S_251007, 0908_MW829_251007	0908_MW264D_251007,	07-Oct-2025	21-Oct-2025	05-Apr-2026	✓	23-Oct-2025	05-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC300_251007		07-Oct-2025	23-Oct-2025	05-Apr-2026	✓	24-Oct-2025	05-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_MW160_251008, 0908_QC104_251008, 0908_MW247S_251008, 0908_MW178_251008, 0908_QC105_251008, 0908_MW128S_251008, 0908_MW279S_251008, 0908_MW106D_251008	0908_MW132D_251008, 0908_MW132I_251008, 0908_MW247D_251008, 0908_MW241S_251008, 0908_MW241D_251008, 0908_MW128D_251008, 0908_MW106S_251008,	08-Oct-2025	21-Oct-2025	06-Apr-2026	✓	23-Oct-2025	06-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC301_251008		08-Oct-2025	23-Oct-2025	06-Apr-2026	✓	24-Oct-2025	06-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW240D_251009, 0908_MW329_251009, 0908_MW344D_251009, 0908_MW342D_251009, 0908_MW354S_251009, 0908_MW340S_251009, 0908_MW126D_251009	0908_MW282S_251009, 0908_MW281S_251009, 0908_MW344S_251009, 0908_QC106_251009, 0908_MW340D_251009, 0908_QC302_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✓	23-Oct-2025	07-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_MW172_251009, 0908_MW175D_251009, 0908_MW468_251009, 0908_MW126S_251009	0908_MW108S_251009, 0908_MW466_251009, 0908_MW109D_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✓	27-Oct-2025	07-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW108D_251010, 0908_MW278D_251010, 0908_MW125S_251010, 0908_MW137_251010	0908_QC110_251010, 0908_MW278S_251010, 0908_QC111_251010,	10-Oct-2025	21-Oct-2025	08-Apr-2026	✓	23-Oct-2025	08-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_MW166_251010, 0908_QC108_251010, 0908_MW169S_251010, 0908_MW731D_251010,	0908_MW167_251010, 0908_MW168_251010, 0908_MW169D_251010, 0908_MW731S_251010	10-Oct-2025	21-Oct-2025	08-Apr-2026	✓	27-Oct-2025	08-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW146S_251010, 0908_QC112_251010, 0908_MW232S_251010,	0908_MW146AD_251010, 0908_MW232D_251010, 0908_QC303_251010	10-Oct-2025	22-Oct-2025	08-Apr-2026	✓	24-Oct-2025	08-Apr-2026	✓



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231C: Perfluoroalkyl Sulfonamides - Continued							
HDPE (no PTFE) (EP231X-LL) 0908_MW125D_251013, 0908_QC304_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC305_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC306_251015	15-Oct-2025	22-Oct-2025	13-Apr-2026	✔	24-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC307_251016	16-Oct-2025	22-Oct-2025	14-Apr-2026	✔	24-Oct-2025	14-Apr-2026	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_MW264S_251007, 0908_MW829_251007	0908_MW264D_251007,	07-Oct-2025	21-Oct-2025	05-Apr-2026	✔	23-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC300_251007		07-Oct-2025	23-Oct-2025	05-Apr-2026	✔	24-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW160_251008, 0908_QC104_251008, 0908_MW247S_251008, 0908_MW178_251008, 0908_QC105_251008, 0908_MW128S_251008, 0908_MW279S_251008, 0908_MW106D_251008	0908_MW132D_251008, 0908_MW132I_251008, 0908_MW247D_251008, 0908_MW241S_251008, 0908_MW241D_251008, 0908_MW128D_251008, 0908_MW106S_251008,	08-Oct-2025	21-Oct-2025	06-Apr-2026	✔	23-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC301_251008		08-Oct-2025	23-Oct-2025	06-Apr-2026	✔	24-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW240D_251009, 0908_MW329_251009, 0908_MW344D_251009, 0908_MW342D_251009, 0908_MW354S_251009, 0908_MW340S_251009, 0908_MW126D_251009	0908_MW282S_251009, 0908_MW281S_251009, 0908_MW344S_251009, 0908_QC106_251009, 0908_MW340D_251009, 0908_QC302_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✔	23-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW172_251009, 0908_MW175D_251009, 0908_MW468_251009, 0908_MW126S_251009	0908_MW108S_251009, 0908_MW466_251009, 0908_MW109D_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✔	27-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW108D_251010, 0908_MW278D_251010, 0908_MW125S_251010, 0908_MW137_251010	0908_QC110_251010, 0908_MW278S_251010, 0908_QC111_251010,	10-Oct-2025	21-Oct-2025	08-Apr-2026	✔	23-Oct-2025	08-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW166_251010, 0908_QC108_251010, 0908_MW169S_251010, 0908_MW731D_251010,	0908_MW167_251010, 0908_MW168_251010, 0908_MW169D_251010, 0908_MW731S_251010	10-Oct-2025	21-Oct-2025	08-Apr-2026	✔	27-Oct-2025	08-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW146S_251010, 0908_QC112_251010, 0908_MW232S_251010,	0908_MW146AD_251010, 0908_MW232D_251010, 0908_QC303_251010	10-Oct-2025	22-Oct-2025	08-Apr-2026	✔	24-Oct-2025	08-Apr-2026	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued							
HDPE (no PTFE) (EP231X-LL) 0908_MW125D_251013, 0908_QC304_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC305_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✓	24-Oct-2025	12-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC306_251015	15-Oct-2025	22-Oct-2025	13-Apr-2026	✓	24-Oct-2025	13-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_QC307_251016	16-Oct-2025	22-Oct-2025	14-Apr-2026	✓	24-Oct-2025	14-Apr-2026	✓

Page : 10 of 13
 Work Order : ES2532693
 Client : AECOM AUSTRALIA PTY LTD
 Project : NSW_0908_PFASOMP_25



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0908_MW264S_251007, 0908_MW829_251007	0908_MW264D_251007,	07-Oct-2025	21-Oct-2025	05-Apr-2026	✔	23-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC300_251007		07-Oct-2025	23-Oct-2025	05-Apr-2026	✔	24-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW160_251008, 0908_QC104_251008, 0908_MW247S_251008, 0908_MW178_251008, 0908_QC105_251008, 0908_MW128S_251008, 0908_MW279S_251008, 0908_MW106D_251008	0908_MW132D_251008, 0908_MW132I_251008, 0908_MW247D_251008, 0908_MW241S_251008, 0908_MW241D_251008, 0908_MW128D_251008, 0908_MW106S_251008,	08-Oct-2025	21-Oct-2025	06-Apr-2026	✔	23-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC301_251008		08-Oct-2025	23-Oct-2025	06-Apr-2026	✔	24-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW240D_251009, 0908_MW329_251009, 0908_MW344D_251009, 0908_MW342D_251009, 0908_MW354S_251009, 0908_MW340S_251009, 0908_MW126D_251009	0908_MW282S_251009, 0908_MW281S_251009, 0908_MW344S_251009, 0908_QC106_251009, 0908_MW340D_251009, 0908_QC302_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✔	23-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW172_251009, 0908_MW175D_251009, 0908_MW468_251009, 0908_MW126S_251009	0908_MW108S_251009, 0908_MW466_251009, 0908_MW109D_251009,	09-Oct-2025	21-Oct-2025	07-Apr-2026	✔	27-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW108D_251010, 0908_MW278D_251010, 0908_MW125S_251010, 0908_MW137_251010	0908_QC110_251010, 0908_MW278S_251010, 0908_QC111_251010,	10-Oct-2025	21-Oct-2025	08-Apr-2026	✔	23-Oct-2025	08-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_MW166_251010, 0908_QC108_251010, 0908_MW169S_251010, 0908_MW731D_251010,	0908_MW167_251010, 0908_MW168_251010, 0908_MW169D_251010, 0908_MW731S_251010	10-Oct-2025	21-Oct-2025	08-Apr-2026	✔	27-Oct-2025	08-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW146S_251010, 0908_QC112_251010, 0908_MW232S_251010,	0908_MW146AD_251010, 0908_MW232D_251010, 0908_QC303_251010	10-Oct-2025	22-Oct-2025	08-Apr-2026	✔	24-Oct-2025	08-Apr-2026	✔



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums - Continued							
HDPE (no PTFE) (EP231X-LL) 0908_MW125D_251013, 0908_QC304_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC305_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC306_251015	15-Oct-2025	22-Oct-2025	13-Apr-2026	✔	24-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_QC307_251016	16-Oct-2025	22-Oct-2025	14-Apr-2026	✔	24-Oct-2025	14-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	6	45	13.33	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	38	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	3	45	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	3	45	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	3	45	6.67	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532694**

Amendment : **2**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]

Telephone : ----

Facsimile : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.2

C-O-C number : 202510_0908_OMP_SD_ALS

Site : Williamtown

Sampler : [REDACTED]

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]

Telephone : +61 2 8784 8555

Facsimile : +61-2-8784 8500

Page : 1 of 3

Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)

QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10

Client Requested Due Date : 27-Oct-2025

Issue Date : 10-Nov-2025

Scheduled Reporting Date : **27-Oct-2025**

Delivery Details

Mode of Delivery : Undefined

No. of coolers/boxes : 1

Receipt Detail :

Security Seal : Not Available

Temperature : 3.0°C - Ice present

No. of samples received / analysed : 20 / 20

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- 05/11/2025: This is an updated SRN to correct the sample ID for 0908_SD059_251007 as per Nicola Tomlin on the 05/11/2025.
- 10/11/2025: This is an updated SRN to correct the samples ID for 0908_SD059_251007.
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: SOIL

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2532694-001	07-Oct-2025 12:50	0908_SD001_251007	✓	✓
ES2532694-002	07-Oct-2025 13:00	0908_SD007_251007	✓	✓
ES2532694-003	07-Oct-2025 13:13	0908_SD006_251007	✓	✓
ES2532694-004	07-Oct-2025 13:26	0908_SD009_251007	✓	✓
ES2532694-005	07-Oct-2025 13:38	0908_SD014_251007	✓	✓
ES2532694-006	07-Oct-2025 14:01	0908_SD005_251007	✓	✓
ES2532694-007	07-Oct-2025 14:13	0908_QC100_251007	✓	✓
ES2532694-008	07-Oct-2025 14:51	0908_SD024_251007	✓	✓
ES2532694-009	07-Oct-2025 15:06	0908_SD023_251007	✓	✓
ES2532694-010	07-Oct-2025 15:25	0908_SD060_251007	✓	✓
ES2532694-011	07-Oct-2025 15:37	0908_SD059_251007	✓	✓
ES2532694-012	07-Oct-2025 15:52	0908_SD081_251007	✓	✓
ES2532694-013	07-Oct-2025 16:02	0908_QC103_251007	✓	✓
ES2532694-014	07-Oct-2025 16:02	0908_SD062_251007	✓	✓
ES2532694-015	08-Oct-2025 13:55	0908_SD079_251008	✓	✓
ES2532694-016	09-Oct-2025 11:13	0908_SD055_251009	✓	✓
ES2532694-017	09-Oct-2025 12:28	0908_SD110_251009	✓	✓
ES2532694-018	09-Oct-2025 12:41	0908_SD108_251009	✓	✓
ES2532694-019	09-Oct-2025 12:51	0908_SD047_251009	✓	✓
ES2532694-020	09-Oct-2025 13:05	0908_SD048_251009	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]
- A4 - AU Tax Invoice (INV) Email [REDACTED]

[REDACTED]
- *AU Certificate of Analysis - NATA (COA) Email [REDACTED]
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email [REDACTED]
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email [REDACTED]
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email [REDACTED]
- Chain of Custody (CoC) (COC) Email [REDACTED]
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email [REDACTED]
- EDI Format - ESDAT (ESDAT) Email [REDACTED]

[REDACTED]
- *AU Certificate of Analysis - NATA (COA) Email [REDACTED]
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email [REDACTED]
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email [REDACTED]
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email [REDACTED]
- Chain of Custody (CoC) (COC) Email [REDACTED]
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email [REDACTED]
- EDI Format - ESDAT (ESDAT) Email [REDACTED]

[REDACTED]
- *AU Certificate of Analysis - NATA (COA) Email [REDACTED]

- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email [REDACTED]

- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email [REDACTED]

- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email [REDACTED]

- Chain of Custody (CoC) (COC) Email [REDACTED]

- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email [REDACTED]

- EDI Format - ESDAT (ESDAT) Email [REDACTED]

[REDACTED]
- *AU Certificate of Analysis - NATA (COA) Email [REDACTED]
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) Email [REDACTED]
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) Email [REDACTED]
- A4 - AU Sample Receipt Notification - Environmental HT (SRN) Email [REDACTED]
- Chain of Custody (CoC) (COC) Email [REDACTED]
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM) Email [REDACTED]
- EDI Format - ESDAT (ESDAT) Email [REDACTED]



Company No Organisation has been set as the Licencee

Project ID NSW_0908_PFASOMP_25

Project Name PFASOMP: RAAF Base Williamtown 2025

SDG/COC # 202510_0908_OMP_SD_ALS

Request / Version 1/1

Laboratory

Destination Lab Australian Laboratory Services Pty Ltd

Lab Quote No NSW_PFASOMP_25

Lab Contact

Report To

Primary Contact

Secondary Contact

Billing

Purchase Order # 60739111_1.10.2

Org to be Billed

Bill To

Attention

TURNAROUND REQUEST: 5 Days

SPECIAL INSTRUCTIONS: ADDITIONALLY, ISSUE LAB REPORTS (ESDAT EDDs AND PDF REPORT) TO

SAMPLED BY:

CONTAINERS

EP231X (solids):PFAS
- Full Suite (30
analytes)

COMMENTS

HOLD

	FIELD ID	MATRIX	DATE
1	0908_SD001_251007	Soil	07 Oct 2025 12:50PM
2	0908_SD007_251007	Soil	07 Oct 2025 01:00PM
3	0908_SD006_251007	Soil	07 Oct 2025 01:13PM
4	0908_SD009_251007	Soil	07 Oct 2025 01:26PM
5	0908_SD014_251007	Soil	07 Oct 2025 01:38PM
6	0908_SD005_251007	Soil	07 Oct 2025 02:01PM
7	0908_QC100_251007	Soil	07 Oct 2025 02:13PM
8	0908_SD024_251007	Soil	07 Oct 2025 02:51PM
9	0908_SD023_251007	Soil	07 Oct 2025 03:06PM
10	0908_SD060_251007	Soil	07 Oct 2025 03:25PM
11	0908_SD059_2510xx	Soil	07 Oct 2025 03:37PM
12	0908_SD081_251007	Soil	07 Oct 2025 03:52PM
13	0908_QC103_251007	Soil	07 Oct 2025 04:02PM
14	0908_SD062_251007	Soil	07 Oct 2025 04:02PM
15	0908_SD079_251008	Soil	08 Oct 2025 01:55PM
16	0908_SD055_251009	Soil	09 Oct 2025 11:13AM
17	0908_SD110_251009	Soil	09 Oct 2025 12:28PM
18	0908_SD108_251009	Soil	09 Oct 2025 12:41PM
19	0908_SD047_251009	Soil	09 Oct 2025 12:51PM
20	0908_SD048_251009	Soil	09 Oct 2025 01:05PM

Environmental Division
Sydney

Work Order Reference

ES2532694



Telephone : + 61-2-8784 8555

Rec: 21-
2011025
1510.

Company	No Organisation has been set as the Licencee
Project ID	NSW_0908_PFASOMP_25
Project Name	PFASOMP: RAAF Base Williamtown 2025
SDG/COC Number	202510_0908_OMP_SD_ALS
Request/Version	1/1

Container Summary

SAMPLES		CONTAINER DETAILS	
FIELD ID		HDPE SOIL JAR NONE 200 mL	
21	0908_SD001_251007		1
22	0908_SD007_251007		1
23	0908_SD006_251007		1
24	0908_SD009_251007		1
25	0908_SD014_251007		1
26	0908_SD005_251007		1
27	0908_QC100_251007		1
28	0908_SD024_251007		1
29	0908_SD023_251007		1
30	0908_SD060_251007		1
31	0908_SD059_2510xx		1
32	0908_SD081_251007		1
33	0908_QC103_251007		1
34	0908_SD062_251007		1
35	0908_SD079_251008		1
36	0908_SD055_251009		1
37	0908_SD110_251009		1
38	0908_SD108_251009		1
39	0908_SD047_251009		1
40	0908_SD048_251009		1

Container Details

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_SD047_251009	Grey	HDPE Soil Jar			200 mL	 00620724034160
0908_SD048_251009	Grey	HDPE Soil Jar			200 mL	 00620724034137
0908_SD055_251009	Grey	HDPE Soil Jar			200 mL	 00620724034167
0908_SD059_2510xx	Grey	HDPE Soil Jar			200 mL	 00621019047617
0908_SD060_251007	Grey	HDPE Soil Jar			200 mL	 00621122086042
0908_SD062_251007	Grey	HDPE Soil Jar			200 mL	 00620724034117
0908_SD079_251008	Grey	HDPE Soil Jar			200 mL	 00621122012053
0908_SD081_251007	Grey	HDPE Soil Jar			200 mL	 00620724034123
0908_SD108_251009	Grey	HDPE Soil Jar			200 mL	 00620724034145
0908_SD110_251009	Grey	HDPE Soil Jar			200 mL	 00620724034143

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: ESdat ECOC x3 # Samples: Phone: ([REDACTED])
Turnaround Requirements: Standard Urgent Sampler: [REDACTED]
Phone: [REDACTED]

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO (N/A)
Free (ice) frozen ice bricks upon receipt? (YES) NO N/A
Random sample temperature on receipt? 3.0 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> <u>16/10</u> Date / Time: <u>1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10</u> <u>1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
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CERTIFICATE OF ANALYSIS

Work Order : **ES2532694**

Amendment : **2**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.2

C-O-C number : 202510_0908_OMP_SD_ALS

Sampler : [REDACTED]

Site : Williamtown

Quote number : NSW_PFASOMP_25

No. of samples received : 20

No. of samples analysed : 20

Page : 1 of 15

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : +61 2 8784 8555

Date Samples Received : 16-Oct-2025 14:10

Date Analysis Commenced : 22-Oct-2025

Issue Date : 10-Nov-2025 18:25



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- Amendment (05/11/2025): This report has been amended as a result of a request to change sample identification numbers (IDs) received from Nicola Tomlin on 05/11/2025, for sample 0908_SD059_251007. All analysis results are as per the previous report.
- Amendment (10/11/2025): This report has been amended as a result of misinterpretation of sample identification numbers (IDs) for sample 0908_SD059_251007. All analysis results are as per the previous report.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				0908_SD001_251007	0908_SD007_251007	0908_SD006_251007	0908_SD009_251007	0908_SD014_251007
Sampling date / time				07-Oct-2025 12:50	07-Oct-2025 13:00	07-Oct-2025 13:13	07-Oct-2025 13:26	07-Oct-2025 13:38
Compound	CAS Number	LOR	Unit	ES2532694-001	ES2532694-002	ES2532694-003	ES2532694-004	ES2532694-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	-----	0.1	%	27.7	42.6	23.4	26.3	45.9
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0006	0.0016	<0.0002	0.0007	0.0021
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0042	0.0299	0.0051	0.0109	0.0391
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0004	<0.0002	0.0002	0.0004
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.0007	<0.0002	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.0003	<0.0002	<0.0002	0.0005
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.0004	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD001_251007	0908_SD007_251007	0908_SD006_251007	0908_SD009_251007	0908_SD014_251007
Sampling date / time				07-Oct-2025 12:50	07-Oct-2025 13:00	07-Oct-2025 13:13	07-Oct-2025 13:26	07-Oct-2025 13:38	
Compound	CAS Number	LOR	Unit	ES2532694-001	ES2532694-002	ES2532694-003	ES2532694-004	ES2532694-005	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0048	0.0333	0.0051	0.0118	0.0423	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0048	0.0315	0.0051	0.0116	0.0412	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0048	0.0318	0.0051	0.0116	0.0417	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD001_251007	0908_SD007_251007	0908_SD006_251007	0908_SD009_251007	0908_SD014_251007
Sampling date / time					07-Oct-2025 12:50	07-Oct-2025 13:00	07-Oct-2025 13:13	07-Oct-2025 13:26	07-Oct-2025 13:38
Compound	CAS Number	LOR	Unit		ES2532694-001	ES2532694-002	ES2532694-003	ES2532694-004	ES2532694-005
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.0002	%		116	110	91.4	102	118
13C8-PFOA	-----	0.0002	%		102	101	100	97.0	97.2



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				0908_SD005_251007	0908_QC100_251007	0908_SD024_251007	0908_SD023_251007	0908_SD060_251007
Sampling date / time				07-Oct-2025 14:01	07-Oct-2025 14:13	07-Oct-2025 14:51	07-Oct-2025 15:06	07-Oct-2025 15:25
Compound	CAS Number	LOR	Unit	ES2532694-006	ES2532694-007	ES2532694-008	ES2532694-009	ES2532694-010
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	33.8	38.0	71.8	37.5	21.1
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0011
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0014
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0009	0.0006	0.0008	<0.0002	0.0130
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0024
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0128	0.0124	0.0252	0.0003	0.129
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0003
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0005
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0003	0.0002	<0.0002	<0.0002	0.0024
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0004
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0003	<0.0002	0.0013
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD005_251007	0908_QC100_251007	0908_SD024_251007	0908_SD023_251007	0908_SD060_251007
Sampling date / time				07-Oct-2025 14:01	07-Oct-2025 14:13	07-Oct-2025 14:51	07-Oct-2025 15:06	07-Oct-2025 15:25	
Compound	CAS Number	LOR	Unit	ES2532694-006	ES2532694-007	ES2532694-008	ES2532694-009	ES2532694-010	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0140	0.0132	0.0265	0.0003	0.152	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0137	0.0130	0.0260	0.0003	0.142	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0140	0.0132	0.0263	0.0003	0.148	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD005_251007	0908_QC100_251007	0908_SD024_251007	0908_SD023_251007	0908_SD060_251007
Sampling date / time					07-Oct-2025 14:01	07-Oct-2025 14:13	07-Oct-2025 14:51	07-Oct-2025 15:06	07-Oct-2025 15:25
Compound	CAS Number	LOR	Unit		ES2532694-006	ES2532694-007	ES2532694-008	ES2532694-009	ES2532694-010
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.0002	%		96.6	104	108	88.6	106
13C8-PFOA	-----	0.0002	%		108	104	109	100	106



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				0908_SD059_251007	0908_SD081_251007	0908_QC103_251007	0908_SD062_251007	0908_SD079_251008
Sampling date / time				07-Oct-2025 15:37	07-Oct-2025 15:52	07-Oct-2025 16:02	07-Oct-2025 16:02	08-Oct-2025 13:55
Compound	CAS Number	LOR	Unit	ES2532694-011	ES2532694-012	ES2532694-013	ES2532694-014	ES2532694-015
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	-----	0.1	%	26.4	61.7	29.5	26.2	46.6
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.0003	<0.0002	<0.0002	0.0015
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0009	0.0048	0.0004	<0.0002	0.0136
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0003	<0.0002	<0.0002	<0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0004
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	0.0003
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD059_251007	0908_SD081_251007	0908_QC103_251007	0908_SD062_251007	0908_SD079_251008
Sampling date / time				07-Oct-2025 15:37	07-Oct-2025 15:52	07-Oct-2025 16:02	07-Oct-2025 16:02	08-Oct-2025 13:55	
Compound	CAS Number	LOR	Unit	ES2532694-011	ES2532694-012	ES2532694-013	ES2532694-014	ES2532694-015	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0012	0.0051	0.0004	<0.0002	0.0158	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0009	0.0051	0.0004	<0.0002	0.0151	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0009	0.0051	0.0004	<0.0002	0.0158	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD059_251007	0908_SD081_251007	0908_QC103_251007	0908_SD062_251007	0908_SD079_251008
Sampling date / time					07-Oct-2025 15:37	07-Oct-2025 15:52	07-Oct-2025 16:02	07-Oct-2025 16:02	08-Oct-2025 13:55
Compound	CAS Number	LOR	Unit		ES2532694-011	ES2532694-012	ES2532694-013	ES2532694-014	ES2532694-015
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.0002	%		107	96.9	106	101	106
13C8-PFOA	-----	0.0002	%		101	104	103	103	106



Analytical Results

Sub-Matrix: SOIL
 (Matrix: SOIL)

Sample ID

				0908_SD055_251009	0908_SD110_251009	0908_SD108_251009	0908_SD047_251009	0908_SD048_251009
Sampling date / time				09-Oct-2025 11:13	09-Oct-2025 12:28	09-Oct-2025 12:41	09-Oct-2025 12:51	09-Oct-2025 13:05
Compound	CAS Number	LOR	Unit	ES2532694-016	ES2532694-017	ES2532694-018	ES2532694-019	ES2532694-020
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	36.0	44.8	39.2	24.5	24.3
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	0.0002	<0.0002	0.0002	0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0039	0.0045	0.0054	0.0070	0.0008
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0006	0.0006	0.0006	0.0008	<0.0002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0185	0.136	0.180	0.0608	0.0033
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	0.0003	0.0042	0.0031	0.0005	<0.0002
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0018	0.0016	0.0058	0.0002	<0.0002
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.0016	0.0023	0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0003	0.0012	0.0012	0.0008	<0.0002
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.0003	0.0002	<0.0002	<0.0002
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0003	<0.0002	0.0006	0.0014	<0.0002
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.0003	<0.0002	<0.0002	<0.0002

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD055_251009	0908_SD110_251009	0908_SD108_251009	0908_SD047_251009	0908_SD048_251009
Sampling date / time				09-Oct-2025 11:13	09-Oct-2025 12:28	09-Oct-2025 12:41	09-Oct-2025 12:51	09-Oct-2025 13:05	
Compound	CAS Number	LOR	Unit	ES2532694-016	ES2532694-017	ES2532694-018	ES2532694-019	ES2532694-020	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	0.0002	0.0046	0.0088	<0.0002	<0.0002	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0261	0.155	0.209	0.0719	0.0041	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0224	0.140	0.185	0.0678	0.0041	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0230	0.144	0.190	0.0702	0.0041	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	0908_SD055_251009	0908_SD110_251009	0908_SD108_251009	0908_SD047_251009	0908_SD048_251009
Sampling date / time					09-Oct-2025 11:13	09-Oct-2025 12:28	09-Oct-2025 12:41	09-Oct-2025 12:51	09-Oct-2025 13:05
Compound	CAS Number	LOR	Unit		ES2532694-016	ES2532694-017	ES2532694-018	ES2532694-019	ES2532694-020
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.0002	%		98.2	107	103	101	96.2
13C8-PFOA	-----	0.0002	%		97.6	102	99.2	104	104



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order : **ES2532694**

Page : 1 of 7

Amendment : **2**

Client : **AECOM AUSTRALIA PTY LTD**

Contact : [REDACTED]

Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

Telephone : ----

Project : NSW_0908_PFASOMP_25

Order number : 60739111_1.10.2

C-O-C number : 202510_0908_OMP_SD_ALS

Sampler : [REDACTED]

Site : Williamtown

Quote number : NSW_PFASOMP_25

No. of samples received : 20

No. of samples analysed : 20

Laboratory : Environmental Division Sydney

Contact : [REDACTED]

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : +61 2 8784 8555

Date Samples Received : 16-Oct-2025

Date Analysis Commenced : 22-Oct-2025

Issue Date : 10-Nov-2025



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6950289)									
ES2532495-001	Anonymous	EA055: Moisture Content	----	0.1	%	13.6	12.0	12.2	0% - 20%
ES2532694-005	0908_SD014_251007	EA055: Moisture Content	----	0.1	%	45.9	45.9	0.0	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6953485)									
ES2532694-016	0908_SD055_251009	EA055: Moisture Content	----	0.1	%	36.0	35.0	2.6	0% - 20%
ES2532713-003	Anonymous	EA055: Moisture Content	----	0.1	%	16.5	17.3	4.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6945247)									
ES2532694-001	0908_SD001_251007	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0006	0.0003	61.3	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0042	0.0047	12.0	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532694-011	0908_SD059_251007	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0009	0.0009	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6945247)									
ES2532694-001	0908_SD001_251007	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2532694-011	0908_SD059_251007	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945247)									
ES2532694-001	0908_SD001_251007	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532694-011	0908_SD059_251007	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945247) - continued									
ES2532694-011	0908_SD059_251007	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6945247)									
ES2532694-001	0908_SD001_251007	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532694-011	0908_SD059_251007	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945247)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	110	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	104	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	92.4	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.7	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945247)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	101	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.8	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	110	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	120	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	102	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	96.9	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	130	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945247)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	87.6	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	109	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	107	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	113	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	115	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	86.8	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945247)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	106	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	93.6	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	109	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	123	69.2	143

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945247)							
ES2532694-001	0908_SD001_251007	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	109	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	110	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	107	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	94.0	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	102	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# 146	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	121	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	111	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945247)							
ES2532694-001	0908_SD001_251007	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	96.5	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	96.6	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	101	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	95.6	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	101	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	104	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	119	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	91.2	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	99.1	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.00125 mg/kg	120	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	127	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945247)							
ES2532694-001	0908_SD001_251007	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	91.9	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	110	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	115	69.8	131



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945247) - continued							
ES2532694-001	0908_SD001_251007	EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	112	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	117	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	117	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	91.3	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945247)							
ES2532694-001	0908_SD001_251007	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	108	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	82.3	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	96.6	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	112	69.2	143



QA/QC Compliance Assessment to assist with Quality Review

Work Order : ES2532694

Page : 1 of 7

Amendment : 2

Client : AECOM AUSTRALIA PTY LTD

Contact : [REDACTED]

Project : NSW_0908_PFASOMP_25

Site : Williamtown

Sampler : [REDACTED]

Order number : 60739111_1.10.2

Laboratory : Environmental Division Sydney

Telephone : +61 2 8784 8555

Date Samples Received : 16-Oct-2025

Issue Date : 10-Nov-2025

No. of samples received : 20

No. of samples analysed : 20

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532694--001	0908_SD001_251007	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	146 %	68.0-136%	Recovery greater than upper data quality objective

Method		Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar							
0908_SD001_251007,	0908_SD007_251007,	----	----	----	23-Oct-2025	21-Oct-2025	2
0908_SD006_251007,	0908_SD009_251007,						
0908_SD014_251007,	0908_SD005_251007,						
0908_QC100_251007,	0908_SD024_251007,						
0908_SD023_251007,	0908_SD060_251007,						
0908_SD059_251007,	0908_SD081_251007,						
0908_QC103_251007,	0908_SD062_251007						
HDPE Soil Jar							
0908_SD079_251008		----	----	----	23-Oct-2025	22-Oct-2025	1
HDPE Soil Jar							
0908_SD055_251009,	0908_SD110_251009,	----	----	----	24-Oct-2025	23-Oct-2025	1
0908_SD108_251009,	0908_SD047_251009,						
0908_SD048_251009							

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0908_SD001_251007, 0908_SD006_251007, 0908_SD014_251007, 0908_QC100_251007, 0908_SD023_251007, 0908_SD059_251007, 0908_QC103_251007, 0908_SD007_251007, 0908_SD009_251007, 0908_SD005_251007, 0908_SD024_251007, 0908_SD060_251007, 0908_SD081_251007, 0908_SD062_251007	07-Oct-2025	----	----	----	23-Oct-2025	21-Oct-2025	✖	
HDPE Soil Jar (EA055) 0908_SD079_251008	08-Oct-2025	----	----	----	23-Oct-2025	22-Oct-2025	✖	
HDPE Soil Jar (EA055) 0908_SD055_251009, 0908_SD108_251009, 0908_SD048_251009	09-Oct-2025	----	----	----	24-Oct-2025	23-Oct-2025	✖	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SD001_251007, 0908_SD006_251007, 0908_SD014_251007, 0908_QC100_251007, 0908_SD023_251007, 0908_SD059_251007, 0908_QC103_251007, 0908_SD007_251007, 0908_SD009_251007, 0908_SD005_251007, 0908_SD024_251007, 0908_SD060_251007, 0908_SD081_251007, 0908_SD062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔	
HDPE Soil Jar (EP231X) 0908_SD079_251008	08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔	
HDPE Soil Jar (EP231X) 0908_SD055_251009, 0908_SD108_251009, 0908_SD048_251009	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔	



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0908_SD001_251007, 0908_SD006_251007, 0908_SD014_251007, 0908_QC100_251007, 0908_SD023_251007, 0908_SD059_251007, 0908_QC103_251007,	0908_SD007_251007, 0908_SD009_251007, 0908_SD005_251007, 0908_SD024_251007, 0908_SD060_251007, 0908_SD081_251007, 0908_SD062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD079_251008		08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD055_251009, 0908_SD108_251009, 0908_SD048_251009	0908_SD110_251009, 0908_SD047_251009,	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0908_SD001_251007, 0908_SD006_251007, 0908_SD014_251007, 0908_QC100_251007, 0908_SD023_251007, 0908_SD059_251007, 0908_QC103_251007,	0908_SD007_251007, 0908_SD009_251007, 0908_SD005_251007, 0908_SD024_251007, 0908_SD060_251007, 0908_SD081_251007, 0908_SD062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD079_251008		08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD055_251009, 0908_SD108_251009, 0908_SD048_251009	0908_SD110_251009, 0908_SD047_251009,	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SD001_251007, 0908_SD006_251007, 0908_SD014_251007, 0908_QC100_251007, 0908_SD023_251007, 0908_SD059_251007, 0908_QC103_251007,	0908_SD007_251007, 0908_SD009_251007, 0908_SD005_251007, 0908_SD024_251007, 0908_SD060_251007, 0908_SD081_251007, 0908_SD062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD079_251008		08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD055_251009, 0908_SD108_251009, 0908_SD048_251009	0908_SD110_251009, 0908_SD047_251009,	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0908_SD001_251007, 0908_SD006_251007, 0908_SD014_251007, 0908_QC100_251007, 0908_SD023_251007, 0908_SD059_251007, 0908_QC103_251007,	0908_SD007_251007, 0908_SD009_251007, 0908_SD005_251007, 0908_SD024_251007, 0908_SD060_251007, 0908_SD081_251007, 0908_SD062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD079_251008		08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
HDPE Soil Jar (EP231X) 0908_SD055_251009, 0908_SD108_251009, 0908_SD048_251009	0908_SD110_251009, 0908_SD047_251009,	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL** Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	4	40	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532695**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**

C-O-C number : **202510_0908_OMP_SW_ALS**
Site : **Williamtown**
Sampler : **[REDACTED] [REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield**
NSW Australia 2164

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 3**
Quote number : **ES2024AECOMAU0012**
(NSW_PFASOMP_25)
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **16-Oct-2025 14:10**
Client Requested Due : **27-Oct-2025**
Date

Issue Date : **21-Oct-2025**
Scheduled Reporting Date : **27-Oct-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.0°C - Ice present**
No. of samples received / analysed : **23 / 23**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2532695-001	07-Oct-2025 12:49	0908_SW001_251007	✓
ES2532695-002	07-Oct-2025 13:04	0908_SW007_251007	✓
ES2532695-003	07-Oct-2025 13:13	0908_SW006_251007	✓
ES2532695-004	07-Oct-2025 13:25	0908_SW009_251007	✓
ES2532695-005	07-Oct-2025 13:43	0908_SW014_251007	✓
ES2532695-006	07-Oct-2025 14:02	0908_SW005_251007	✓
ES2532695-007	07-Oct-2025 14:07	0908_QC101_251007	✓
ES2532695-008	07-Oct-2025 14:52	0908_SW024_251007	✓
ES2532695-009	07-Oct-2025 15:06	0908_SW023_251007	✓
ES2532695-010	07-Oct-2025 15:07	0908_QC102_251007	✓
ES2532695-011	07-Oct-2025 15:26	0908_SW060_251007	✓
ES2532695-012	07-Oct-2025 15:38	0908_SW059_251007	✓
ES2532695-013	07-Oct-2025 15:53	0908_SW081_251007	✓
ES2532695-014	07-Oct-2025 16:04	0908_SW062_251007	✓
ES2532695-015	08-Oct-2025 13:56	0908_SW079_251008	✓
ES2532695-016	08-Oct-2025 15:45	0908_SW588_251008	✓
ES2532695-017	09-Oct-2025 11:15	0908_SW055_251009	✓
ES2532695-018	09-Oct-2025 12:29	0908_SW110_251009	✓
ES2532695-019	09-Oct-2025 12:38	0908_SW108_251009	✓
ES2532695-020	09-Oct-2025 12:52	0908_SW047_251009	✓
ES2532695-021	09-Oct-2025 13:05	0908_SW048_251009	✓
ES2532695-022	09-Oct-2025 13:06	0908_QC107_251009	✓
ES2532695-023	10-Oct-2025 10:23	0908_SW582_251010	✓

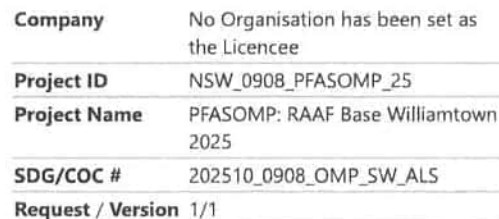
Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]



Request / Version 1/1

Lab Contact	
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Secondary Contact

Attention

1	0908_SW001_251007	Water	07 Oct 2025 12:49PM
2	0908_SW007_251007	Water	07 Oct 2025 01:04PM
3	0908_SW006_251007	Water	07 Oct 2025 01:13PM
4	0908_SW009_251007	Water	07 Oct 2025 01:25PM
5	0908_SW014_251007	Water	07 Oct 2025 01:43PM
6	0908_SW005_251007	Water	07 Oct 2025 02:02PM
7	0908_QC101_251007	Water	07 Oct 2025 02:07PM
8	0908_SW024_251007	Water	07 Oct 2025 02:52PM
9	0908_SW023_251007	Water	07 Oct 2025 03:06PM
10	0908_QC102_251007	Water	07 Oct 2025 03:07PM
11	0908_SW060_251007	Water	07 Oct 2025 03:26PM
12	0908_SW059_251007	Water	07 Oct 2025 03:38PM
13	0908_SW081_251007	Water	07 Oct 2025 03:53PM
14	0908_SW062_251007	Water	07 Oct 2025 04:04PM
15	0908_SW079_251008	Water	08 Oct 2025 01:56PM
16	0908_SW588_251008	Water	08 Oct 2025 03:45PM
17	0908_SW055_251009	Water	09 Oct 2025 11:15AM
18	0908_SW110_251009	Water	09 Oct 2025 12:29PM
19	0908_SW108_251009	Water	09 Oct 2025 12:38PM
20	0908_SW047_251009	Water	09 Oct 2025 12:52PM
21	0908_SW048_251009	Water	09 Oct 2025 01:05PM
22	0908_QC107_251009	Water	09 Oct 2025 01:06PM
23	0908_SW582_251010	Water	10 Oct 2025 10:23AM

Telephone : - 61-2-8784 8555

Rec: [REDACTED]
2011085 1510

Company	No Organisation has been set as the Licencee
Project ID	NSW_0908_PFASOMP_25
Project Name	PFASOMP: RAAF Base Williamtown 2025
SDG/COC Number	202510_0908_OMP_SW_ALS
Request/Version	1/1

Container Summary

SAMPLES	CONTAINER DETAILS		
FIELD ID	HDPE (no PTFE) None 20 mL		
24 0908_SW001_251007			4
0908_SW007_251007			4
0908_SW006_251007			4
0908_SW009_251007			4
0908_SW014_251007			4
0908_SW005_251007			4
0908_QC101_251007			4
0908_SW024_251007			4
0908_SW023_251007			4
0908_QC102_251007			4
0908_SW060_251007			4
0908_SW059_251007			4
0908_SW081_251007			4
0908_SW062_251007			4
0908_SW079_251008			4
0908_SW588_251008			4
0908_SW055_251009			4
0908_SW110_251009			4
0908_SW108_251009			4
0908_SW047_251009			4
0908_SW048_251009			4
0908_QC107_251009			4
0908_SW582_251010			4

Container Details

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC107_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023323
0908_QC107_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023029
0908_SW001_251007	Grey	HDPE (no PTFE)			20 mL	 00352504037980
0908_SW001_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038130
0908_SW001_251007	Grey	HDPE (no PTFE)			20 mL	 00352504037940
0908_SW001_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038020
0908_SW005_251007	Grey	HDPE (no PTFE)			20 mL	 00352504037970
0908_SW005_251007	Grey	HDPE (no PTFE)			20 mL	 00352504037952
0908_SW005_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038030
0908_SW005_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038007

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_SW009_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038120
0908_SW009_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038100
0908_SW014_251007	Grey	HDPE (no PTFE)			20 mL	 00352504037985
0908_SW014_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038220
0908_SW014_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038232
0908_SW014_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038199
0908_SW023_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038117
0908_SW023_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038115
0908_SW023_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038176
0908_SW023_251007	Grey	HDPE (no PTFE)			20 mL	 00352504037984

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_SW048_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023279
0908_SW048_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023283
0908_SW055_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038018
0908_SW055_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038139
0908_SW055_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038165
0908_SW055_251009	Grey	HDPE (no PTFE)			20 mL	 00352504038217
0908_SW059_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038234
0908_SW059_251007	Grey	HDPE (no PTFE)			20 mL	 00352504037975
0908_SW059_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038082
0908_SW059_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038119

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_SW079_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038164
0908_SW079_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038107
0908_SW081_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038021
0908_SW081_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038034
0908_SW081_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038104
0908_SW081_251007	Grey	HDPE (no PTFE)			20 mL	 00352504038201
0908_SW108_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023085
0908_SW108_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023122
0908_SW108_251009	Grey	HDPE (no PTFE)			20 mL	 00352504023265
0908_SW108_251009	Grey	HDPE (no PTFE)			20 mL	 00352504030585

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_SW588_251008	Grey	HDPE (no PTFE)			20 mL	 00352504037958
0908_SW588_251008	Grey	HDPE (no PTFE)			20 mL	 00352504038032

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: ESdat ECOC x3 # Samples: Phone: ([REDACTED])
Turnaround Requirements: Standard Urgent Sampler: [REDACTED]
Phone: ([REDACTED])

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3.0 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> <u>16/10</u> Date / Time: <u>1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10</u> <u>1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1522</u>
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CERTIFICATE OF ANALYSIS

Work Order : **ES2532695**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **202510_0908_OMP_SW_ALS**
Sampler : **[REDACTED]**
Site : **Williamtown**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **23**
No. of samples analysed : **23**

Page : 1 of 18
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **21-Oct-2025**
Issue Date : **27-Oct-2025 15:36**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_SW001_251007	0908_SW007_251007	0908_SW006_251007	0908_SW009_251007	0908_SW014_251007
Sampling date / time				07-Oct-2025 12:49	07-Oct-2025 13:04	07-Oct-2025 13:13	07-Oct-2025 13:25	07-Oct-2025 13:43
Compound	CAS Number	LOR	Unit	ES2532695-001	ES2532695-002	ES2532695-003	ES2532695-004	ES2532695-005
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.54	0.14	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	1.04	0.42	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.88	0.52	0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.06	0.02	7.36	6.03	0.32
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	1.04	0.65	0.03
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.12	<0.01	22.2	18.8	1.04
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.09	0.10	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.2	0.2	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.32	0.29	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.04	<0.02	1.55	1.32	0.06
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.26	0.23	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.78	0.72	0.02
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW001_251007	0908_SW007_251007	0908_SW006_251007	0908_SW009_251007	0908_SW014_251007
Sampling date / time					07-Oct-2025 12:49	07-Oct-2025 13:04	07-Oct-2025 13:13	07-Oct-2025 13:25	07-Oct-2025 13:43
Compound	CAS Number	LOR	Unit	ES2532695-001	ES2532695-002	ES2532695-003	ES2532695-004	ES2532695-005	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	0.22	0.02	36.3	29.4	1.49	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	0.18	0.02	29.6	24.8	1.36	
Sum of PFAS (WA DER List)	----	0.01	µg/L	0.22	0.02	33.7	28.0	1.44	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW001_251007	0908_SW007_251007	0908_SW006_251007	0908_SW009_251007	0908_SW014_251007
Sampling date / time					07-Oct-2025 12:49	07-Oct-2025 13:04	07-Oct-2025 13:13	07-Oct-2025 13:25	07-Oct-2025 13:43
Compound	CAS Number	LOR	Unit		ES2532695-001	ES2532695-002	ES2532695-003	ES2532695-004	ES2532695-005
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.02	%		93.5	98.6	95.4	94.1	93.4
13C8-PFOA	-----	0.02	%		97.1	99.7	95.7	95.9	95.2



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_SW005_251007	0908_QC101_251007	0908_SW024_251007	0908_SW023_251007	0908_QC102_251007
Sampling date / time				07-Oct-2025 14:02	07-Oct-2025 14:07	07-Oct-2025 14:52	07-Oct-2025 15:06	07-Oct-2025 15:07
Compound	CAS Number	LOR	Unit	ES2532695-006	ES2532695-007	ES2532695-008	ES2532695-009	ES2532695-010
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.27	0.27	0.10	0.16	0.16
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.02	0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.98	0.88	0.12	0.15	0.15
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.06	0.05	0.03	0.04	0.04
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	0.02	<0.01	<0.01	0.01
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW005_251007	0908_QC101_251007	0908_SW024_251007	0908_SW023_251007	0908_QC102_251007
Sampling date / time				07-Oct-2025 14:02	07-Oct-2025 14:07	07-Oct-2025 14:52	07-Oct-2025 15:06	07-Oct-2025 15:07	
Compound	CAS Number	LOR	Unit	ES2532695-006	ES2532695-007	ES2532695-008	ES2532695-009	ES2532695-010	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	1.35	1.24	0.25	0.35	0.36	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	1.25	1.15	0.22	0.31	0.31	
Sum of PFAS (WA DER List)	----	0.01	µg/L	1.33	1.22	0.25	0.35	0.36	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW005_251007	0908_QC101_251007	0908_SW024_251007	0908_SW023_251007	0908_QC102_251007
Sampling date / time					07-Oct-2025 14:02	07-Oct-2025 14:07	07-Oct-2025 14:52	07-Oct-2025 15:06	07-Oct-2025 15:07
Compound	CAS Number	LOR	Unit		ES2532695-006	ES2532695-007	ES2532695-008	ES2532695-009	ES2532695-010
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.02	%		93.8	93.5	89.6	90.3	91.1
13C8-PFOA	-----	0.02	%		96.8	95.1	95.1	96.6	97.2



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_SW060_251007	0908_SW059_251007	0908_SW081_251007	0908_SW062_251007	0908_SW079_251008
Sampling date / time				07-Oct-2025 15:26	07-Oct-2025 15:38	07-Oct-2025 15:53	07-Oct-2025 16:04	08-Oct-2025 13:56
Compound	CAS Number	LOR	Unit	ES2532695-011	ES2532695-012	ES2532695-013	ES2532695-014	ES2532695-015
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.25	<0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.72	0.04	<0.02	<0.02	0.03
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	1.11	0.05	<0.02	<0.02	0.04
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	10.4	0.58	<0.01	0.09	0.28
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	1.18	0.04	<0.02	<0.02	<0.02
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	27.1	0.78	<0.01	0.08	0.24
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.08	<0.02	<0.02	<0.02	<0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	0.3	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.44	0.03	<0.02	<0.02	<0.02
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	2.08	0.12	<0.02	<0.02	0.05
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.36	0.02	<0.02	<0.02	<0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.96	0.05	<0.01	<0.01	0.02
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW060_251007	0908_SW059_251007	0908_SW081_251007	0908_SW062_251007	0908_SW079_251008
Sampling date / time				07-Oct-2025 15:26	07-Oct-2025 15:38	07-Oct-2025 15:53	07-Oct-2025 16:04	08-Oct-2025 13:56	
Compound	CAS Number	LOR	Unit	ES2532695-011	ES2532695-012	ES2532695-013	ES2532695-014	ES2532695-015	
				Result	Result	Result	Result	Result	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L	45.0	1.71	<0.01	0.17	0.66	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	37.5	1.36	<0.01	0.17	0.52	
Sum of PFAS (WA DER List)	----	0.01	µg/L	42.4	1.62	<0.01	0.17	0.62	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW060_251007	0908_SW059_251007	0908_SW081_251007	0908_SW062_251007	0908_SW079_251008
Sampling date / time					07-Oct-2025 15:26	07-Oct-2025 15:38	07-Oct-2025 15:53	07-Oct-2025 16:04	08-Oct-2025 13:56
Compound	CAS Number	LOR	Unit		ES2532695-011	ES2532695-012	ES2532695-013	ES2532695-014	ES2532695-015
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.02	%		95.1	94.7	91.1	92.0	91.7
13C8-PFOA	-----	0.02	%		95.0	97.4	100	95.6	97.9



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_SW588_251008	0908_SW055_251009	0908_SW110_251009	0908_SW108_251009	0908_SW047_251009
Sampling date / time				08-Oct-2025 15:45	09-Oct-2025 11:15	09-Oct-2025 12:29	09-Oct-2025 12:38	09-Oct-2025 12:52
Compound	CAS Number	LOR	Unit	ES2532695-016	ES2532695-017	ES2532695-018	ES2532695-019	ES2532695-020
				Result	Result	Result	Result	Result
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.02	<0.02	<0.02	<0.02
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.04	0.06	0.04	0.04	0.02
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.02	0.08	0.06	0.06	0.03
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.26	0.90	0.75	0.81	0.62
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.02	0.06	0.05	0.05	0.04
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.08	1.86	3.80	4.52	4.36
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	0.03	0.02
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.06	0.09	0.08	0.04
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.07	0.18	0.18	0.19	0.12
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.03	0.04	0.04	0.02
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	0.08	0.08	0.08	0.06
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW588_251008	0908_SW055_251009	0908_SW110_251009	0908_SW108_251009	0908_SW047_251009
Sampling date / time					08-Oct-2025 15:45	09-Oct-2025 11:15	09-Oct-2025 12:29	09-Oct-2025 12:38	09-Oct-2025 12:52
Compound	CAS Number	LOR	Unit		ES2532695-016	ES2532695-017	ES2532695-018	ES2532695-019	ES2532695-020
				Result	Result	Result	Result	Result	Result
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	<0.02	<0.02
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	0.09	0.11	0.05
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	<0.05	<0.05
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		1.51	3.33	5.18	6.01	5.38
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		1.34	2.76	4.55	5.33	4.98
Sum of PFAS (WA DER List)	----	0.01	µg/L		1.47	3.17	5.07	5.87	5.29
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW588_251008	0908_SW055_251009	0908_SW110_251009	0908_SW108_251009	0908_SW047_251009
Sampling date / time					08-Oct-2025 15:45	09-Oct-2025 11:15	09-Oct-2025 12:29	09-Oct-2025 12:38	09-Oct-2025 12:52
Compound	CAS Number	LOR	Unit		ES2532695-016	ES2532695-017	ES2532695-018	ES2532695-019	ES2532695-020
					Result	Result	Result	Result	Result
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	-----	0.02	%		90.9	90.1	90.0	90.9	90.0
13C8-PFOA	-----	0.02	%		100.0	95.2	94.8	96.9	96.1



Analytical Results

Sub-Matrix: WATER
 (Matrix: WATER)

Sample ID

				0908_SW048_251009	0908_QC107_251009	0908_SW582_251010	----	----
Sampling date / time				09-Oct-2025 13:05	09-Oct-2025 13:06	10-Oct-2025 10:23	----	----
Compound	CAS Number	LOR	Unit	ES2532695-021	ES2532695-022	ES2532695-023	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.02	0.02	<0.02	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.07	0.03	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.09	0.09	0.04	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.02	1.05	0.71	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.08	0.08	0.07	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.04	1.02	4.20	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	<0.02	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.04	0.04	0.04	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.16	0.17	0.12	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.03	0.03	0.02	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.10	0.10	0.07	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	<0.02	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	<0.05	----	----

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW048_251009	0908_QC107_251009	0908_SW582_251010	----	----
Sampling date / time					09-Oct-2025 13:05	09-Oct-2025 13:06	10-Oct-2025 10:23	----	----
Compound	CAS Number	LOR	Unit		ES2532695-021	ES2532695-022	ES2532695-023	-----	-----
				Result	Result	Result	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L		<0.05	<0.05	<0.05	----	----
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L		<0.02	<0.02	<0.02	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L		<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L		<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L		<0.05	<0.05	<0.05	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L		<0.05	<0.05	<0.05	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L		<0.02	<0.02	<0.02	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L		<0.02	<0.02	<0.02	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L		<0.05	<0.05	<0.05	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L		<0.05	<0.05	<0.05	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L		<0.05	<0.05	<0.05	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L		<0.05	<0.05	<0.05	----	----
EP231P: PFAS Sums									
Sum of PFAS	----	0.01	µg/L		2.64	2.67	5.30	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L		2.06	2.07	4.91	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L		2.45	2.48	5.19	----	----
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	0908_SW048_251009	0908_QC107_251009	0908_SW582_251010	----	----
Sampling date / time					09-Oct-2025 13:05	09-Oct-2025 13:06	10-Oct-2025 10:23	----	----
Compound	CAS Number	LOR	Unit		ES2532695-021	ES2532695-022	ES2532695-023	-----	-----
					Result	Result	Result	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		92.1	93.2	94.6	----	----
13C8-PFOA	----	0.02	%		96.5	98.4	97.2	----	----



Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532695	Page	: 1 of 11
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 21-Oct-2025
C-O-C number	: 202510_0908_OMP_SW_ALS	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED] [REDACTED]		
Site	: Williamtown		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 23		
No. of samples analysed	: 23		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6945385)									
ES2532693-030	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	1.20	1.20	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.08	0.09	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.10	0.11	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2532693-042	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	3.62	3.56	1.7	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.98	0.99	1.6	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.08	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.08	0.08	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	0.06	0.07	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6946558)									
ES2532695-005	0908_SW014_251007	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.32	0.32	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.04	1.03	1.1	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.02	0.02	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6946558) - continued									
ES2532695-005	0908_SW014_251007	EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
ES2532695-015	0908_SW079_251008	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.28	0.28	0.0	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.24	0.25	4.4	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6945385)							
ES2532693-030	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.04	0.04	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.03	0.03	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.09	0.09	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
		ES2532693-042	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.28	0.28
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3			0.02	µg/L	0.08	0.09	0.0	No Limit
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4			0.02	µg/L	0.48	0.48	0.0	0% - 20%
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9			0.02	µg/L	0.12	0.13	0.0	No Limit
EP231X: Perfluorononanoic acid (PFNA)	375-95-1			0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2			0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8			0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1			0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8			0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7			0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5			0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4			0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6946558)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6946558) - continued									
ES2532695-005	0908_SW014_251007	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	0.03	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2532695-015	0908_SW079_251008	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.05	0.05	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945385)									
ES2532693-030	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532693-042	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6945385) - continued									
ES2532693-042	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6946558)									
ES2532695-005	0908_SW014_251007	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532695-015	0908_SW079_251008	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6945385)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6945385) - continued									
ES2532693-030	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532693-042	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6946558)									
ES2532695-005	0908_SW014_251007	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532695-015	0908_SW079_251008	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6945385)									
ES2532693-030	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	1.62	1.64	1.2	0% - 20%
ES2532693-042	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	5.81	5.80	0.2	0% - 20%
EP231P: PFAS Sums (QC Lot: 6946558)									
ES2532695-005	0908_SW014_251007	EP231X: Sum of PFAS	----	0.01	µg/L	1.49	1.49	0.0	0% - 20%
ES2532695-015	0908_SW079_251008	EP231X: Sum of PFAS	----	0.01	µg/L	0.66	0.67	1.5	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945385)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	106	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	84.4	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	87.6	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	87.6	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	94.1	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	96.1	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	83.2	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	84.3	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6946558)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	110	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	92.2	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	101	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	94.7	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	91.8	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	90.3	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	76.9	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	85.1	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945385)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	95.7	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	95.0	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	92.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	96.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	92.7	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	120	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	113	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	114	72.0	134
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	120	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	87.4	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	88.4	62.9	136

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6946558)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	101	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	108	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	102	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	99.4	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	105	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	97.8	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	118	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	116	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	117	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	108	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	96.6	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	92.9	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945385)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	98.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	94.0	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	90.2	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	104	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	104	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	107	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	91.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6946558)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	104	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	96.3	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	94.6	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	115	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	116	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	113	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	101	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945385)								

Matrix Spike (MS) Report

Sub-Matrix: WATER

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6945385)							
ES2532693-031	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	110	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	87.7	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	96.6	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	111	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	97.4	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	122	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	89.8	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	83.0	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6946558)							
ES2532695-006	0908_SW005_251007	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	102	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	87.6	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	92.3	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	87.6	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	89.0	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	# Not Determined	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	81.1	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	92.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945385)							

Sub-Matrix: WATER				Matrix Spike (MS) Report					
				Spike	SpikeRecovery(%)	Acceptable Limits (%)			
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6945385) - continued									
ES2532693-031	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	98.2	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	110	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	90.1	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	98.9	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	102	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	99.1	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	111	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	108	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	114	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	115	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	90.6	71.0	132		
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	92.4	62.9	136		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6946558)									
ES2532695-006	0908_SW005_251007	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	98.8	73.0	129		
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	103	72.0	129		
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	94.0	72.0	129		
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	97.9	72.0	130		
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	101	71.0	133		
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	97.0	69.0	130		
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	121	71.0	129		
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	113	69.0	133		
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	112	72.0	134		
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.25 µg/L	113	65.0	144		
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	92.8	71.0	132		
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	91.3	62.9	136		
		EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6945385)							
		ES2532693-031	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	102	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8			0.625 µg/L	97.7	68.0	141		
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2			0.625 µg/L	95.2	62.6	147		
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7			0.625 µg/L	114	66.0	145		
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2			0.625 µg/L	108	57.6	145		
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9			0.25 µg/L	109	65.0	136		
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6			0.25 µg/L	94.5	61.0	135		
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6946558)									



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6946558) - continued							
ES2532695-006	0908_SW005_251007	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	103	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	102	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	103	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	123	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	118	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	104	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	101	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6945385)							
ES2532693-031	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	101	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	123	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	117	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	94.2	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6946558)							
ES2532695-006	0908_SW005_251007	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	105	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	114	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	112	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	90.2	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532695	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Williamtown	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 23
Order number	: 60739111_1.10.2	No. of samples analysed	: 23

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532695--006	0908_SW005_251007	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids									
HDPE (no PTFE) (EP231X) 0908_SW001_251007, 0908_SW006_251007,		0908_SW007_251007, 0908_SW009_251007	07-Oct-2025	21-Oct-2025	05-Apr-2026	✓	27-Oct-2025	05-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_SW014_251007, 0908_QC101_251007, 0908_SW023_251007, 0908_SW060_251007, 0908_SW081_251007,		0908_SW005_251007, 0908_SW024_251007, 0908_QC102_251007, 0908_SW059_251007, 0908_SW062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✓	24-Oct-2025	05-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_SW079_251008,		0908_SW588_251008	08-Oct-2025	22-Oct-2025	06-Apr-2026	✓	24-Oct-2025	06-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_SW055_251009, 0908_SW108_251009, 0908_SW048_251009,		0908_SW110_251009, 0908_SW047_251009, 0908_QC107_251009	09-Oct-2025	22-Oct-2025	07-Apr-2026	✓	24-Oct-2025	07-Apr-2026	✓
HDPE (no PTFE) (EP231X) 0908_SW582_251010			10-Oct-2025	22-Oct-2025	08-Apr-2026	✓	24-Oct-2025	08-Apr-2026	✓



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0908_SW001_251007, 0908_SW006_251007,	0908_SW007_251007, 0908_SW009_251007	07-Oct-2025	21-Oct-2025	05-Apr-2026	✔	27-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW014_251007, 0908_QC101_251007, 0908_SW023_251007, 0908_SW060_251007, 0908_SW081_251007,	0908_SW005_251007, 0908_SW024_251007, 0908_QC102_251007, 0908_SW059_251007, 0908_SW062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	24-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW079_251008,	0908_SW588_251008	08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	24-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW055_251009, 0908_SW108_251009, 0908_SW048_251009,	0908_SW110_251009, 0908_SW047_251009, 0908_QC107_251009	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	24-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW582_251010		10-Oct-2025	22-Oct-2025	08-Apr-2026	✔	24-Oct-2025	08-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0908_SW001_251007, 0908_SW006_251007,	0908_SW007_251007, 0908_SW009_251007	07-Oct-2025	21-Oct-2025	05-Apr-2026	✔	27-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW014_251007, 0908_QC101_251007, 0908_SW023_251007, 0908_SW060_251007, 0908_SW081_251007,	0908_SW005_251007, 0908_SW024_251007, 0908_QC102_251007, 0908_SW059_251007, 0908_SW062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	24-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW079_251008,	0908_SW588_251008	08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	24-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW055_251009, 0908_SW108_251009, 0908_SW048_251009,	0908_SW110_251009, 0908_SW047_251009, 0908_QC107_251009	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	24-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW582_251010		10-Oct-2025	22-Oct-2025	08-Apr-2026	✔	24-Oct-2025	08-Apr-2026	✔



Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_SW001_251007, 0908_SW006_251007,	0908_SW007_251007, 0908_SW009_251007	07-Oct-2025	21-Oct-2025	05-Apr-2026	✔	27-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW014_251007, 0908_QC101_251007, 0908_SW023_251007, 0908_SW060_251007, 0908_SW081_251007,	0908_SW005_251007, 0908_SW024_251007, 0908_QC102_251007, 0908_SW059_251007, 0908_SW062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	24-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW079_251008,	0908_SW588_251008	08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	24-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW055_251009, 0908_SW108_251009, 0908_SW048_251009,	0908_SW110_251009, 0908_SW047_251009, 0908_QC107_251009	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	24-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW582_251010		10-Oct-2025	22-Oct-2025	08-Apr-2026	✔	24-Oct-2025	08-Apr-2026	✔
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X) 0908_SW001_251007, 0908_SW006_251007,	0908_SW007_251007, 0908_SW009_251007	07-Oct-2025	21-Oct-2025	05-Apr-2026	✔	27-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW014_251007, 0908_QC101_251007, 0908_SW023_251007, 0908_SW060_251007, 0908_SW081_251007,	0908_SW005_251007, 0908_SW024_251007, 0908_QC102_251007, 0908_SW059_251007, 0908_SW062_251007	07-Oct-2025	22-Oct-2025	05-Apr-2026	✔	24-Oct-2025	05-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW079_251008,	0908_SW588_251008	08-Oct-2025	22-Oct-2025	06-Apr-2026	✔	24-Oct-2025	06-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW055_251009, 0908_SW108_251009, 0908_SW048_251009,	0908_SW110_251009, 0908_SW047_251009, 0908_QC107_251009	09-Oct-2025	22-Oct-2025	07-Apr-2026	✔	24-Oct-2025	07-Apr-2026	✔
HDPE (no PTFE) (EP231X) 0908_SW582_251010		10-Oct-2025	22-Oct-2025	08-Apr-2026	✔	24-Oct-2025	08-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	4	38	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	38	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532709

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.2

C-O-C number : 89353
Site : Offsite 2
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10
Client Requested Due : 28-Oct-2025
Date

Issue Date : 21-Oct-2025
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Not Available
Temperature : 3.0°C - Ice present
No. of samples received / analysed : 2 / 2

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532709-001	13-Oct-2025 11:07	0908_MW271D_251013	✓
ES2532709-002	13-Oct-2025 10:59	0908_MW271S_251013	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email

Email

Email

Email

Email



 CHAIN OF CUSTODY COC#: 89353 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY:  DATE TIME: 11/12/25 1:30	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 2 ORDER NO: 60739111_1.10.2 PROJECT MANAGER:  PRIMARY SAMPLER:  EMAIL REPORTS TO: 		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:	
CONTACT PH: SAMPLER MOBILE:  QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Water PFAS Full Suite Low Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW271D_251013		13/10/2025 11:07 AM	WATER	ALS: 4 Non ALS: 0	No	X		
002	0908_MW271S_251013		13/10/2025 10:59 AM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
 Sydney
 Work Order Reference
ES2532709



Telephone : + 61-2-8784 8555



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

EMAIL REPORTS TO:

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW271D_251013	HDPE (no PTFE)	20 mL	00352504030581	Grey	No	
001	0908_MW271D_251013	HDPE (no PTFE)	20 mL	00352504023298	Grey	No	
001	0908_MW271D_251013	HDPE (no PTFE)	20 mL	00352504023108	Grey	No	
001	0908_MW271D_251013	HDPE (no PTFE)	20 mL	00352504023164	Grey	No	
002	0908_MW271S_251013	HDPE (no PTFE)	20 mL	00352504023239	Grey	No	
002	0908_MW271S_251013	HDPE (no PTFE)	20 mL	00352504023143	Grey	No	
002	0908_MW271S_251013	HDPE (no PTFE)	20 mL	00352504030611	Grey	No	
002	0908_MW271S_251013	HDPE (no PTFE)	20 mL	00352504023297	Grey	No	

Total Bottle Count: ALS: 8, Non ALS: 0

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 89353 # Samples: 2 Sampler: [REDACTED]
Phone: [REDACTED] Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

Special Instructions:**E-MAILED**LAB OF ORIGIN:
NEWCASTLE**ALS Use Only**

Custody seal intact? YES NO N/A
Free ice/ frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3.0 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
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CERTIFICATE OF ANALYSIS

Work Order : **ES2532709**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89353**
Sampler : **[REDACTED]**
Site : **Offsite 2**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **23-Oct-2025**
Issue Date : **27-Oct-2025 13:58**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.

Sub-Matrix: GROUNDWATER
(Matrix: WATER)

Sub-Matrix: GROUNDWATER (Matrix: WATER)				Sample ID	0908_MW271D_25101 3	0908_MW271S_25101 3	----	----	----
Sampling date / time				13-Oct-2025 11:07	13-Oct-2025 10:59	----	----	----	
Compound	CAS Number	LOR	Unit	ES2532709-001	ES2532709-002	-----	-----	-----	
				Result	Result	----	----	----	
EP231A: Perfluoroalkyl Sulfonic Acids									
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.10	----	----	----	
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.004	0.192	----	----	----	
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.040	----	----	----	
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.010	0.044	----	----	----	
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.044	0.027	----	----	----	
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	----	----	----	
EP231B: Perfluoroalkyl Carboxylic Acids									
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.02	----	----	----	
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.009	----	----	----	
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.042	----	----	----	
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.002	----	----	----	
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	----	----	----	
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	----	----	----	
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	----	----	----	
EP231C: Perfluoroalkyl Sulfonamides									



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW271D_25101 3	0908_MW271S_25101 3	----	----	----
Sampling date / time				13-Oct-2025 11:07	13-Oct-2025 10:59	----	----	----
Compound	CAS Number	LOR	Unit	ES2532709-001	ES2532709-002	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	0.058	0.476	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.054	0.071	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.058	0.336	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	88.5	88.5	----	----	----
13C8-PFOA	----	0.002	%	94.6	96.9	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532709	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 23-Oct-2025
C-O-C number	: 89353	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 2		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.034	0.031	7.8	0% - 50%
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	0.009	0.008	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.080	0.084	5.0	0% - 20%
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	0.006	0.007	15.2	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.029	0.027	6.6	0% - 50%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	0.02	0.02	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.013	0.009	38.4	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.009	0.008	13.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949528) - continued									
ES2532717-004	Anonymous	EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.275	0.284	3.4	0% - 20%
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.708	0.723	2.0	0% - 20%
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	0.068	0.070	2.0	0% - 20%
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.034	0.035	3.9	0% - 50%
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	0.002	0.003	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.12	0.12	0.0	0% - 50%
ES2532717-004	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528) - continued									
ES2532676-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005 (0.008) *	µg/L	1.86	1.67	10.4	0% - 20%
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	0.016	0.018	9.9	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949528)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	119	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	98.0	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	128	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	120	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	114	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	77.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	98.1	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	121	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	97.1	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	123	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	108	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	90.4	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	123	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	128	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	108	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	109	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	127	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	110	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	117	65.0	136



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	102	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.5	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	77.2	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	77.8	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	107	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	99.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	75.0	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	118	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	116	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	97.7	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	92.1	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	122	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	94.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	116	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	87.4	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	106	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	77.7	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	104	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	110	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	99.8	65.6	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	99.0	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	110	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	96.0	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	105	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	111	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	117	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	90.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	91.8	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	# Not Determined	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	86.9	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	81.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532709	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 2	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.2	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluoropentanoic acid (PFPeA)	2706-90-3	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2532676--002	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL)	0908_MW271D_251013,	0908_MW271S_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids									
HDPE (no PTFE) (EP231X-LL)	0908_MW271D_251013,	0908_MW271S_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓
EP231C: Perfluoroalkyl Sulfonamides									
HDPE (no PTFE) (EP231X-LL)	0908_MW271D_251013,	0908_MW271S_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
HDPE (no PTFE) (EP231X-LL)	0908_MW271D_251013,	0908_MW271S_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓
EP231P: PFAS Sums									
HDPE (no PTFE) (EP231X-LL)	0908_MW271D_251013,	0908_MW271S_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532710

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.2

C-O-C number : 89356
Site : Offsite 7
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10
Client Requested Due : 28-Oct-2025
Date

Issue Date : 21-Oct-2025
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Not Available
Temperature : 3.0°C - Ice present
No. of samples received / analysed : 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532710-001	14-Oct-2025 11:20	0908_MW262S_251014	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

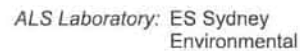
[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email





DATE TIME:

Telephone - 61-2-8784 8555

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 89356 # Samples: 1 Phone: ([REDACTED])
Turnaround Requirements: Standard Urgent
Phone: ([REDACTED])

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact?	YES	NO	<u>N/A</u>
Free <u>ice</u> / frozen ice bricks upon receipt?	<u>YES</u>	NO	N/A
Random sample temperature on receipt?	<u>3</u>	°C	

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
---	--	--	--

ALS Use Only

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM

Project Manager: [REDACTED]

Phone: ([REDACTED])

ALS Compass COC Reference: 89356

Samples: 1

Sampler: [REDACTED]

Phone: ([REDACTED])

Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact?

YES NO N/A

Free ice frozen ice bricks upon receipt?

YES NO N/A

Random sample temperature on receipt?

3 °C

Custody:

Relinquished by:

[REDACTED]

Date / Time:

16/10/25 1411

Received by:

[REDACTED]

Date / Time:

16/10
1410

Relinquished by:

[REDACTED]

Date / Time:

16/10
1700

Received by:

[REDACTED]

Date / Time:

16/10 1922



CERTIFICATE OF ANALYSIS

Work Order : **ES2532710**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89356**
Sampler : **[REDACTED]**
Site : **Offsite 7**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **23-Oct-2025**
Issue Date : **27-Oct-2025 15:35**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW262S_25101
4

Sampling date / time

14-Oct-2025 11:20

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2532710-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW262S_25101
4

Sampling date / time

14-Oct-2025 11:20

Compound CAS Number LOR Unit

ES2532710-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	86.4	----	----	----	----
13C8-PFOA	----	0.002	%	95.1	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532710	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 23-Oct-2025
C-O-C number	: 89356	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 7		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	0908_MW262S_251014	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504)									
ES2532710-001	0908_MW262S_251014	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504) - continued									
ES2532710-001	0908_MW262S_251014	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6951504)									
ES2532710-001	0908_MW262S_251014	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	0908_MW262S_251014	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	107	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.4	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	99.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	106	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	89.4	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	95.6	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	82.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	102	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	112	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	91.6	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	100	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	119	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	122	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	115	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	113	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	92.2	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	92.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	114	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	108	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	105	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	101	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	98.4	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	103	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	127	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	119	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	90.4	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	94.7	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	94.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	84.2	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	83.0	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	79.1	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	73.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	99.5	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	124	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	104	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	91.8	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	97.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	99.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	127	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	116	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	116	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	97.4	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	91.3	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	95.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	101	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued							
ES2532715-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	104	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	107	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	104	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	112	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	95.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	109	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	114	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	124	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	76.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532710	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 7	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.2	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_251014	14-Oct-2025	23-Oct-2025	12-Apr-2026	✓	27-Oct-2025	12-Apr-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_251014	14-Oct-2025	23-Oct-2025	12-Apr-2026	✓	27-Oct-2025	12-Apr-2026	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_251014	14-Oct-2025	23-Oct-2025	12-Apr-2026	✓	27-Oct-2025	12-Apr-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_251014	14-Oct-2025	23-Oct-2025	12-Apr-2026	✓	27-Oct-2025	12-Apr-2026	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW262S_251014	14-Oct-2025	23-Oct-2025	12-Apr-2026	✓	27-Oct-2025	12-Apr-2026	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532712

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.2

C-O-C number : 89412
Site : Offsite 6
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10
Client Requested Due : 28-Oct-2025
Date :

Issue Date : 21-Oct-2025
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Not Available
Temperature : 3.0°C - Ice present
No. of samples received / analysed : 2 / 2

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2532712-001	14-Oct-2025 10:17	0908_SD019_251014	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2532712-002	14-Oct-2025 10:15	0908_SW019_251014	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

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Email
Email



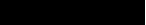
 CHAIN OF CUSTODY COC#: 89412 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: [Redacted] DATE TIME: 21/10/2025 9:30	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 6 ORDER NO: 60739111_1.10.2 PROJECT MANAGER: [Redacted] PRIMARY SAMPLER: [Redacted] EMAIL REPORTS TO: [Redacted]		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:	
CONTACT PH: SAMPLER MOBILE: [Redacted] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Soil PFAS Full Suite Standard Level LOR SOIL	Water PFAS Full Suite Standard Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SD019_251014		14/10/2025 10:17 AM	SOIL	ALS: 1 Non ALS: 0	No	X			
002	0908_SW019_251014		14/10/2025 10:15 AM	WATER	ALS: 4 Non ALS: 0	No		X		

Environmental Division
 Sydney
 Work Order Reference
ES2532712



Telephone : + 61-2-8784 8555

 CHAIN OF CUSTODY COC#: 89412 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED  DATE TIME: 21/6/25 9:32	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:		
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 6 ORDER NO: 60739111_1.10.2 PROJECT MANAGER:  PRIMARY SAMPLER:  EMAIL REPORTS TO: 		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:			
CONTACT PH:	SAMPLER MOBILE: 						
QUOTE NO: ES24AECOMAU0012 V3		/ ES2024AECOMAU0012					
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_SD019_251014	HDPE Soil Jar	200 mL	00621223061506	Grey	No	
002	0908_SW019_251014	HDPE (no PTFE)	20 mL	00352504023212	Grey	No	
002	0908_SW019_251014	HDPE (no PTFE)	20 mL	00352504023202	Grey	No	
002	0908_SW019_251014	HDPE (no PTFE)	20 mL	00352504023218	Grey	No	
002	0908_SW019_251014	HDPE (no PTFE)	20 mL	00352504030600	Grey	No	
Total Bottle Count: ALS: 5, Non ALS: 0							

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 89412 # Samples: 2 Sampler: [REDACTED]
Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
---	--	--	--



CERTIFICATE OF ANALYSIS

Work Order : **ES2532712**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89412**
Sampler : **[REDACTED]**
Site : **Offsite 6**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 9
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **22-Oct-2025**
Issue Date : **27-Oct-2025 15:36**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD019_251014

Sampling date / time				14-Oct-2025 10:17	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2532712-001	-----	-----	-----	-----
Result				Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	43.6	----	----	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0333	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0008	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0006	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	----	----	----	----

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD019_251014		----	----	----	----
Sampling date / time					14-Oct-2025 10:17		----	----	----	----
Compound	CAS Number	LOR	Unit		ES2532712-001		-----	-----	-----	-----
					Result		----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued										
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005		----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides										
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002		----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005		----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005		----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005		----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005		----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002		----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002		----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005		----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005		----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005		----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005		----	----	----	----
EP231P: PFAS Sums										
Sum of PFAS	----	0.0002	mg/kg		0.0364		----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0347		----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0364		----	----	----	----
EP231S: PFAS Surrogate										



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD019_251014	----	----	----	----
				Sampling date / time	14-Oct-2025 10:17	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2532712-001	-----	-----	-----	-----
				Result		----	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%		90.0	----	----	----	----
13C8-PFOA	----	0.0002	%		95.4	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW019_251014

Sampling date / time

14-Oct-2025 10:15

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2532712-002

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.10	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.11	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.02	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW019_251014

Sampling date / time

14-Oct-2025 10:15

Compound

CAS Number

LOR

Unit

ES2532712-002

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

0.23

Sum of PFHxS and PFOS

355-46-4/1763-23-

0.01

µg/L

0.21

Sum of PFAS (WA DER List)

0.01

µg/L

0.23

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0908_SW019_251014	----	----	----	----
			Sampling date / time	14-Oct-2025 10:15	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2532712-002	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	94.3	----	----	----	----
13C8-PFOA	----	0.02	%	94.1	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532712	Page	: 1 of 12
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 22-Oct-2025
C-O-C number	: 89412	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 6		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6953485)									
ES2532694-016	Anonymous	EA055: Moisture Content	----	0.1	%	36.0	35.0	2.6	0% - 20%
ES2532713-003	Anonymous	EA055: Moisture Content	----	0.1	%	16.5	17.3	4.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	0908_SD019_251014	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0015	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0333	0.0350	5.0	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0207	0.0225	8.5	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101)									



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101) - continued									
ES2532712-001	0908_SD019_251014	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0008	0.0008	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0006	0.0008	23.3	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	0.0005	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0010	0.0011	10.2	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0008	0.0005	43.4	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0016	0.0018	7.1	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005 (0.0006)*	mg/kg	0.0008	<0.0006	19.6	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101)									
ES2532712-001	0908_SD019_251014	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101) - continued									
ES2532741-004	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	0.0020	0.0026	28.4	0% - 50%
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	0908_SD019_251014	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	0.0132	0.0134	1.0	0% - 20%
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027) - continued									
ES2532713-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.78	0.74	5.3	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.29	1.25	2.9	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.05	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.06	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.15	0.15	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949027) - continued									
ES2532671-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6949027)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231P: PFAS Sums (QC Lot: 6949027) - continued									
ES2532671-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	2.51	2.43	3.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	113	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.6	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	102	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	122	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	126	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	124	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.0	61.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) LowHigh	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	101	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	86.2	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	88.8	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.5	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	115	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	109	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	116	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	116	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	111	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	90.3	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	94.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	91.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	102	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	116	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	115	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	129	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.1	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	97.6	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	110	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.5	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	116	66.0	145



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
				Method: Compound	CAS Number	LOR	Unit	Result
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	105	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	109	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	84.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	92.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	89.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	74.8	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	81.2	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	0908_SD019_251014	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	117	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	109	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	101	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	92.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	103	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	96.0	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	94.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)							
ES2532712-001	0908_SD019_251014	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	102	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	110	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	102	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	112	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	115	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	125	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101) - continued							
ES2532712-001	0908_SD019_251014	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	120	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	97.3	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	133	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)							
ES2532712-001	0908_SD019_251014	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	90.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	118	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	117	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	122	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	127	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	122	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	102	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	0908_SD019_251014	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	90.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	84.8	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	76.9	69.2	143

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	0908_SW019_251014	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	118	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	101	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	122	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	100.0	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	117	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	93.5	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	95.5	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	81.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027)							
ES2532712-002	0908_SW019_251014	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	91.3	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	104	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	115	72.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027) - continued							
ES2532712-002	0908_SW019_251014	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	95.1	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	117	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	122	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	110	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	90.8	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	81.2	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	92.2	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	93.2	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)							
ES2532712-002	0908_SW019_251014	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	98.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	122	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	113	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	118	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	107	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	87.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	0908_SW019_251014	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	111	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	96.9	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	91.2	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	93.9	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532712	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 6	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.2	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532712--001	0908_SD019_251014	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_SD019_251014	14-Oct-2025	----	----	----	24-Oct-2025	28-Oct-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_SD019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_SD019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_SD019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_SW019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_SW019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW019_251014	14-Oct-2025	22-Oct-2025	12-Apr-2026	✔	24-Oct-2025	12-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	12	16.67	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532713**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**

C-O-C number : **89414**
Site : **Offsite 5**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 4**
Quote number : **ES2024AECOMAU0012
(NSW_PFASOMP_25)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **16-Oct-2025 14:10**
Client Requested Due : **28-Oct-2025**
Date

Issue Date : **21-Oct-2025**
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.0°C - Ice present**
No. of samples received / analysed : **5 / 5**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2532713-001	13-Oct-2025 15:25	0908_SD254_251013	✓	✓
ES2532713-002	13-Oct-2025 15:27	0908_SD255_251013	✓	✓
ES2532713-003	13-Oct-2025 15:13	0908_SD259_251013	✓	✓
ES2532713-004	13-Oct-2025 15:23	0908_SD326_251013	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2532713-005	13-Oct-2025 15:15	0908_SW259_251013	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email





COC#: 89414

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED I

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW 0908 PFASOMP 25

SITE: Offsite 5

ORDER NO: 60739111 1.10.2

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE DETAILS

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Soil PFAS Full Suite Standard Level LOR SOIL	Water PFAS Full Suite Standard Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SD254_251013		13/10/2025 03:25 PM	SOIL	ALS: 1 Non ALS: 0	No	X			
002	0908_SD255_251013		13/10/2025 03:27 PM	SOIL	ALS: 1 Non ALS: 0	No	X			
003	0908_SD259_251013		13/10/2025 03:13 PM	SOIL	ALS: 1 Non ALS: 0	No	X			
004	0908_SD326_251013		13/10/2025 03:23 PM	SOIL	ALS: 1 Non ALS: 0	No	X			
005	0908_SW259_251013		13/10/2025 03:15 PM	WATER	ALS: 4 Non ALS: 0	No		X		

Environmental Division
Sydney

Work Order Reference

ES2532713



Telephone : - 61-2-8784 8555



COC#: 89414

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED

DATE TIME: 01/01/2001 10:00

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW 0908 PFASOMP 25

SITE: Offsite 5

ORDER NO: 60739111 1.10.2

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU001
2

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_SD254_251013	HDPE Soil Jar	200 mL	00621223061436	Grey	No	
002	0908_SD255_251013	HDPE Soil Jar	200 mL	00621223061464	Grey	No	
003	0908_SD259_251013	HDPE Soil Jar	200 mL	00621223061458	Grey	No	
004	0908_SD326_251013	HDPE Soil Jar	200 mL	00621223061455	Grey	No	
005	0908_SW259_251013	HDPE (no PTFE)	20 mL	00352504023176	Grey	No	
005	0908_SW259_251013	HDPE (no PTFE)	20 mL	00352504023034	Grey	No	
005	0908_SW259_251013	HDPE (no PTFE)	20 mL	00352504023270	Grey	No	
005	0908_SW259_251013	HDPE (no PTFE)	20 mL	00352504022999	Grey	No	

Total Bottle Count: ALS: 8, Non ALS: 0

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOMProject Manager: [REDACTED]
Phone: ([REDACTED])ALS Compass COC Reference: 89414 # Samples: 5Sampler: [REDACTED]
Phone: ([REDACTED])Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact?	YES	NO	<u>N/A</u>
Free <u>ice</u> / frozen ice bricks upon receipt?	<u>YES</u>	NO	N/A
Random sample temperature on receipt?	<u>3</u>	°C	

Custody:

Relinquished by:

[REDACTED]

Date / Time:

16/10/25 1411

Received by:

[REDACTED]

Date / Time:

16/10
1410

Relinquished by:

[REDACTED]

Date / Time:

16/10
1700

Received by:

[REDACTED]

Date / Time:

16/10 1922



CERTIFICATE OF ANALYSIS

Work Order : **ES2532713**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89414**
Sampler : **[REDACTED]**
Site : **Offsite 5**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **5**
No. of samples analysed : **5**

Page : 1 of 9
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **22-Oct-2025**
Issue Date : **27-Oct-2025 15:38**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

				0908_SD254_251013	0908_SD255_251013	0908_SD259_251013	0908_SD326_251013	----
Sampling date / time				13-Oct-2025 15:25	13-Oct-2025 15:27	13-Oct-2025 15:13	13-Oct-2025 15:23	----
Compound	CAS Number	LOR	Unit	ES2532713-001	ES2532713-002	ES2532713-003	ES2532713-004	-----
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	53.3	24.1	16.5	19.3	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0002	<0.0002	<0.0002	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	0.0003	<0.0002	<0.0002	<0.0002	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0454	0.0272	0.0007	0.0049	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.0003	<0.0002	<0.0002	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	<0.001	<0.001	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0004	<0.0002	<0.0002	<0.0002	----
Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD254_251013	0908_SD255_251013	0908_SD259_251013	0908_SD326_251013	----
Sampling date / time					13-Oct-2025 15:25	13-Oct-2025 15:27	13-Oct-2025 15:13	13-Oct-2025 15:23	----
Compound	CAS Number	LOR	Unit	ES2532713-001	ES2532713-002	ES2532713-003	ES2532713-004	-----	
				Result	Result	Result	Result	----	
EP231B: Perfluoroalkyl Carboxylic Acids - Continued									
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
EP231C: Perfluoroalkyl Sulfonamides									
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	<0.0002	<0.0002	----	
EP231D: (n:2) Fluorotelomer Sulfonic Acids									
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	<0.0005	<0.0005	----	
EP231P: PFAS Sums									
Sum of PFAS	----	0.0002	mg/kg	0.0475	0.0277	0.0007	0.0049	----	
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg	0.0468	0.0274	0.0007	0.0049	----	
Sum of PFAS (WA DER List)	----	0.0002	mg/kg	0.0472	0.0274	0.0007	0.0049	----	
EP231S: PFAS Surrogate									



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD254_251013	0908_SD255_251013	0908_SD259_251013	0908_SD326_251013	----
Sampling date / time					13-Oct-2025 15:25	13-Oct-2025 15:27	13-Oct-2025 15:13	13-Oct-2025 15:23	----
Compound	CAS Number	LOR	Unit		ES2532713-001	ES2532713-002	ES2532713-003	ES2532713-004	-----
					Result	Result	Result	Result	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%		97.6	105	94.0	102	----
13C8-PFOA	----	0.0002	%		100	101	96.8	98.9	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW259_251013

Sampling date / time

13-Oct-2025 15:15

Compound

CAS Number

LOR

Unit

ES2532713-005

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.78	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.06	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.29	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.15	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW259_251013

Sampling date / time

13-Oct-2025 15:15

Compound

CAS Number

LOR

Unit

ES2532713-005

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

2.51

Sum of PFHxS and PFOS

355-46-4/1763-23-1

0.01

µg/L

2.07

Sum of PFAS (WA DER List)

0.01

µg/L

2.38

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)				Sample ID	0908_SW259_251013	----	----	----	----
				Sampling date / time	13-Oct-2025 15:15	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2532713-005	-----	-----	-----	-----
				Result		----	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.02	%		93.0	----	----	----	----
13C8-PFOA	----	0.02	%		97.6	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532713	Page	: 1 of 12
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 22-Oct-2025
C-O-C number	: 89414	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 5		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 5		
No. of samples analysed	: 5		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6953485)									
ES2532694-016	Anonymous	EA055: Moisture Content	----	0.1	%	36.0	35.0	2.6	0% - 20%
ES2532713-003	0908_SD259_251013	EA055: Moisture Content	----	0.1	%	16.5	17.3	4.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0015	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0333	0.0350	5.0	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0207	0.0225	8.5	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101)									



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101) - continued									
ES2532712-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0008	0.0008	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0006	0.0008	23.3	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	0.0005	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0010	0.0011	10.2	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0008	0.0005	43.4	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0016	0.0018	7.1	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005 (0.0006)*	mg/kg	0.0008	<0.0006	19.6	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101) - continued									
ES2532741-004	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	0.0020	0.0026	28.4	0% - 50%
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	0.0132	0.0134	1.0	0% - 20%
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027) - continued									
ES2532713-005	0908_SW259_251013	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.78	0.74	5.3	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.29	1.25	2.9	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.05	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.06	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2532713-005	0908_SW259_251013	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.15	0.15	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949027) - continued									
ES2532671-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	0908_SW259_251013	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	0908_SW259_251013	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6949027)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231P: PFAS Sums (QC Lot: 6949027) - continued									
ES2532671-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532713-005	0908_SW259_251013	EP231X: Sum of PFAS	----	0.01	µg/L	2.51	2.43	3.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	113	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.6	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	102	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	122	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	126	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	124	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.0	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
						Concentration	LCS	Low	High
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)									
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	101	62.0	145	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	86.2	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	88.8	65.0	137	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.5	69.2	143	

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)
				Concentration		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	115	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	109	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	116	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	116	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	111	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	90.3	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	94.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	91.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	102	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	116	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	115	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	129	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	72.0	134
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.1	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	97.6	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	110	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.5	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	116	66.0	145



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
				Method: Compound	CAS Number	LOR	Unit	Result
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	105	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	109	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	84.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	92.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	89.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	74.8	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	81.2	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	117	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	109	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	101	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	92.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	103	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	96.0	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	94.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	102	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	110	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	102	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	112	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	115	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	125	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101) - continued							
ES2532712-001	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	120	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	97.3	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	133	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	90.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	118	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	117	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	122	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	127	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	122	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	102	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	90.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	84.8	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	76.9	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	118	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	101	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	122	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	100.0	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	117	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	93.5	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	95.5	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	81.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	91.3	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	104	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	115	72.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027) - continued							
ES2532712-002	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	95.1	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	117	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	122	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	110	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	90.8	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	81.2	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	92.2	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	93.2	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	98.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	122	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	113	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	118	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	107	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	87.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	111	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	96.9	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	91.2	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	93.9	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532713	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 5	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 5
Order number	: 60739111_1.10.2	No. of samples analysed	: 5

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532712--001	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content (Dried @ 105-110°C)								
HDPE Soil Jar (EA055) 0908_SD254_251013, 0908_SD259_251013,	0908_SD255_251013, 0908_SD326_251013	13-Oct-2025	----	----	----	24-Oct-2025	27-Oct-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SD254_251013, 0908_SD259_251013,	0908_SD255_251013, 0908_SD326_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE Soil Jar (EP231X) 0908_SD254_251013, 0908_SD259_251013,	0908_SD255_251013, 0908_SD326_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE Soil Jar (EP231X) 0908_SD254_251013, 0908_SD259_251013,	0908_SD255_251013, 0908_SD326_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE Soil Jar (EP231X) 0908_SD254_251013, 0908_SD259_251013,	0908_SD255_251013, 0908_SD326_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231P: PFAS Sums								
HDPE Soil Jar (EP231X) 0908_SD254_251013, 0908_SD259_251013,	0908_SD255_251013, 0908_SD326_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓



Matrix: WATER		Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.					
Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW259_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_SW259_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_SW259_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW259_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW259_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	12	16.67	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type	Method	Count		Rate (%)			Quality Control Specification
Analytical Methods		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532715**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**

C-O-C number : **89415**
Site : **Offsite 8**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 4**
Quote number : **ES2024AECOMAU0012
(NSW_PFASOMP_25)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **16-Oct-2025 14:10**
Client Requested Due : **28-Oct-2025**
Date

Issue Date : **21-Oct-2025**
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.0°C - Ice present**
No. of samples received / analysed : **1 / 1**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532715-001	15-Oct-2025 11:25	0908_MW230S_251015	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email





CHAIN OF CUSTODY

COC#: 89415

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

21/10/25 9:30

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 8

ORDER NO: 60739111_1.10.2

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Water PFAS Full Suite Low Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW230S_251015		15/10/2025 11:25 AM	WATER	ALS: 4 Non ALS: 0	No	X		

ANALYSIS REQUIRED

Environmental Division
Sydney

Work Order Reference

ES2532715



Telephone : + 61-2-8784 8555

CHAIN OF CUSTODY COC#: 89415 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:		RELINQUISHED BY: DATE TIME:		RECEIVED BY: DATE TIME:	
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 8 ORDER NO: 60739111_1.10.2 PROJECT MANAGER: [REDACTED] PRIMARY SAMPLER: [REDACTED] EMAIL REPORTS TO: [REDACTED]				TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:			
CONTACT PH: [REDACTED]		SAMPLER MOBILE: [REDACTED]		QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					
SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON		
001	0908_MW230S_251015	HDPE (no PTFE)	20 mL	00352504023078	Grey	No			
001	0908_MW230S_251015	HDPE (no PTFE)	20 mL	00352504023128	Grey	No			
001	0908_MW230S_251015	HDPE (no PTFE)	20 mL	00352504022968	Grey	No			
001	0908_MW230S_251015	HDPE (no PTFE)	20 mL	00352504023111	Grey	No			
Total Bottle Count: ALS: 4, Non ALS: 0									

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 89415 # Samples: 1 Sampler: [REDACTED]
Phone: [REDACTED] Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
---	--	--	--



CERTIFICATE OF ANALYSIS

Work Order : **ES2532715**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89415**
Sampler : **[REDACTED]**
Site : **Offsite 8**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **23-Oct-2025**
Issue Date : **27-Oct-2025 15:37**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW230S_25101
5

Sampling date / time

15-Oct-2025 11:25

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2532715-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.005	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	0.008	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.028	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.009	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.004	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW230S_25101
5

Sampling date / time

15-Oct-2025 11:25

Compound CAS Number LOR Unit

ES2532715-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.054	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.028	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.046	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	90.1	----	----	----	----
13C8-PFOA	----	0.002	%	100	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532715	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 23-Oct-2025
C-O-C number	: 89415	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 8		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504) - continued									
ES2532710-001	Anonymous	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	107	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.4	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	99.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	106	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	89.4	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	95.6	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	82.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	102	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	112	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	91.6	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	100	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	119	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	122	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	115	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	113	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	92.2	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	92.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	114	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	108	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	105	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	101	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	98.4	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	103	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	127	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	119	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	90.4	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	0908_MW230S_251015	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	94.7	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	94.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	84.2	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	83.0	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	79.1	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	73.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)							
ES2532715-001	0908_MW230S_251015	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	99.5	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	124	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	104	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	91.8	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	97.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	99.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	127	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	116	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	116	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	97.4	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	91.3	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	95.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)							
ES2532715-001	0908_MW230S_251015	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	101	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued							
ES2532715-001	0908_MW230S_251015	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	104	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	107	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	104	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	112	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	95.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	0908_MW230S_251015	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	109	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	114	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	124	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	76.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532715	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 8	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.2	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_251015	15-Oct-2025	23-Oct-2025	13-Apr-2026	✓	27-Oct-2025	13-Apr-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_251015	15-Oct-2025	23-Oct-2025	13-Apr-2026	✓	27-Oct-2025	13-Apr-2026	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_251015	15-Oct-2025	23-Oct-2025	13-Apr-2026	✓	27-Oct-2025	13-Apr-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_251015	15-Oct-2025	23-Oct-2025	13-Apr-2026	✓	27-Oct-2025	13-Apr-2026	✓
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW230S_251015	15-Oct-2025	23-Oct-2025	13-Apr-2026	✓	27-Oct-2025	13-Apr-2026	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532716**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**

C-O-C number : **89417**
Site : **Offsite 4**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 4**
Quote number : **ES2024AECOMAU0012
(NSW_PFASOMP_25)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **16-Oct-2025 14:10**
Client Requested Due : **28-Oct-2025**
Date

Issue Date : **21-Oct-2025**
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.0°C - Ice present**
No. of samples received / analysed : **2 / 2**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2532716-001	13-Oct-2025 14:19	0908_SD333_251013	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)
ES2532716-002	13-Oct-2025 14:16	0908_SW333_251013	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email



 CHAIN OF CUSTODY COC#: 89417 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY: [Redacted] DATE TIME: 21/10/25 5:30	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 4 ORDER NO: 60739111_1.10.2 PROJECT MANAGER: [Redacted] PRIMARY SAMPLER: [Redacted] EMAIL REPORTS TO: [Redacted]		TURNAROUND REQUIREMENTS: 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:	
CONTACT PH: SAMPLER MOBILE: [Redacted] QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012					

SAMPLE DETAILS							ANALYSIS REQUIRED			
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Soil PFAS Full Suite Standard Level LOR SOIL	Water PFAS Full Suite Standard Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_SD333_251013		13/10/2025 02:19 PM	SOIL	ALS: 1 Non ALS: 0	No	X			
002	0908_SW333_251013		13/10/2025 02:16 PM	WATER	ALS: 4 Non ALS: 0	No		X		

Environmental Division
 Sydney
 Work Order Reference
ES2532716



Telephone : +61-2-8784 8556

ALS Use Only

Custody Document for Submissions via ALS Compass AppProject: 60739111 Client: AECOM Project Manager: [REDACTED]
Phone: [REDACTED]ALS Compass COC Reference: 89417 # Samples: 2 Sampler: [REDACTED]
Phone: [REDACTED]Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/AFree ice / frozen ice bricks upon receipt? YES NO N/ARandom sample temperature on receipt? 3 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
---	--	--	--



CERTIFICATE OF ANALYSIS

Work Order : **ES2532716**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89417**
Sampler : **[REDACTED]**
Site : **Offsite 4**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **2**
No. of samples analysed : **2**

Page : **1 of 9**
Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **22-Oct-2025**
Issue Date : **27-Oct-2025 15:31**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD333_251013

Sampling date / time

13-Oct-2025 14:19

Compound	CAS Number	LOR	Unit

ES2532716-001

Result

EA055: Moisture Content (Dried @ 105-110°C)

Moisture Content

0.1

%

43.9

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid
(PFPrS)

423-41-6

0.0005

mg/kg

<0.0005

Perfluorobutane sulfonic acid
(PFBS)

375-73-5

0.0002

mg/kg

0.0003

Perfluoropentane sulfonic acid
(PFPeS)

2706-91-4

0.0002

mg/kg

0.0016

Perfluorohexane sulfonic acid
(PFHxS)

355-46-4

0.0002

mg/kg

0.0110

Perfluoroheptane sulfonic acid
(PFHpS)

375-92-8

0.0002

mg/kg

0.0002

Perfluorooctane sulfonic acid
(PFOS)

1763-23-1

0.0002

mg/kg

0.0117

Perfluorononane sulfonic acid
(PFNS)

68259-12-1

0.0002

mg/kg

<0.0002

Perfluorodecane sulfonic acid
(PFDS)

335-77-3

0.0002

mg/kg

0.0005

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)

375-22-4

0.001

mg/kg

<0.001

Perfluoropentanoic acid (PFPeA)

2706-90-3

0.0002

mg/kg

<0.0002

Perfluorohexanoic acid (PFHxA)

307-24-4

0.0002

mg/kg

0.0002

Perfluoroheptanoic acid (PFHpA)

375-85-9

0.0002

mg/kg

<0.0002

Perfluorooctanoic acid (PFOA)

335-67-1

0.0002

mg/kg

<0.0002

Perfluorononanoic acid (PFNA)

375-95-1

0.0002

mg/kg

<0.0002

Perfluorodecanoic acid (PFDA)

335-76-2

0.0002

mg/kg

<0.0002

Perfluoroundecanoic acid
(PFUnDA)

2058-94-8

0.0002

mg/kg

<0.0002

Perfluorododecanoic acid
(PFDoDA)

307-55-1

0.0002

mg/kg

<0.0002

Perfluorotridecanoic acid
(PFTrDA)

72629-94-8

0.0002

mg/kg

<0.0002

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD333_251013		----	----	----	----
Sampling date / time					13-Oct-2025 14:19		----	----	----	----
Compound	CAS Number	LOR	Unit		ES2532716-001		-----	-----	-----	-----
					Result		----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued										
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005		----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides										
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002		----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005		----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005		----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005		----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005		----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002		----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002		----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005		----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005		----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005		----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005		----	----	----	----
EP231P: PFAS Sums										
Sum of PFAS	----	0.0002	mg/kg		0.0255		----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0227		----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0232		----	----	----	----
EP231S: PFAS Surrogate										



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD333_251013	----	----	----	----
				Sampling date / time	13-Oct-2025 14:19	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2532716-001	-----	-----	-----	-----	
				Result	----	----	----	----	
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%	105	---	----	---	----	
13C8-PFOA	----	0.0002	%	100	---	----	---	----	



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW333_251013

Sampling date / time

13-Oct-2025 14:16

Compound

CAS Number

LOR

Unit

ES2532716-002

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.04	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.05	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.57	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.04	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	0.67	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.11	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.04	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW333_251013

Sampling date / time

13-Oct-2025 14:16

Compound

CAS Number

LOR

Unit

ES2532716-002

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

1.52

Sum of PFHxS and PFOS

355-46-4/1763-23-

0.01

µg/L

1.24

Sum of PFAS (WA DER List)

0.01

µg/L

1.43

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0908_SW333_251013	----	----	----	----
			Sampling date / time	13-Oct-2025 14:16	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2532716-002	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	94.5	----	----	----	----
13C8-PFOA	----	0.02	%	94.4	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532716	Page	: 1 of 12
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 22-Oct-2025
C-O-C number	: 89417	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 4		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6953485)									
ES2532694-016	Anonymous	EA055: Moisture Content	----	0.1	%	36.0	35.0	2.6	0% - 20%
ES2532713-003	Anonymous	EA055: Moisture Content	----	0.1	%	16.5	17.3	4.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0015	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0333	0.0350	5.0	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0207	0.0225	8.5	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101)									



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101) - continued									
ES2532712-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0008	0.0008	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0006	0.0008	23.3	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	0.0005	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0010	0.0011	10.2	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0008	0.0005	43.4	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0016	0.0018	7.1	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005 (0.0006)*	mg/kg	0.0008	<0.0006	19.6	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101) - continued									
ES2532741-004	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	0.0020	0.0026	28.4	0% - 50%
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	0.0132	0.0134	1.0	0% - 20%
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027) - continued									
ES2532713-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.78	0.74	5.3	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.29	1.25	2.9	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.05	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.06	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.15	0.15	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949027) - continued									
ES2532671-001	Anonymous	EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6949027)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231P: PFAS Sums (QC Lot: 6949027) - continued									
ES2532671-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	2.51	2.43	3.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	113	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.6	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	102	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	122	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	126	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	124	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.0	61.0	139



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) LowHigh	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	101	62.0	145
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	86.2	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	88.8	65.0	137
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.5	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	115	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	109	72.0	130
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	116	71.0	127
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	116	68.0	131
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	111	69.0	134
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	90.3	65.0	140
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	94.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	91.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	102	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	116	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.5	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	115	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	129	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	72.0	134
EP231X: Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.1	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	97.6	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	110	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.5	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	116	66.0	145



Sub-Matrix: **WATER**

Method Blank (MB) Report				Laboratory Control Spike (LCS) Report				
				Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
					LCS		Low	High
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027) - continued								
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	105	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	109	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	84.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	92.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	89.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	74.8	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	81.2	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	117	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	109	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	101	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	92.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	103	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	96.0	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	94.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	102	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	110	69.0	132
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	102	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	112	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	115	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	125	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101) - continued							
ES2532712-001	Anonymous	EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	120	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	97.3	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	133	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	90.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	118	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	117	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	122	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	127	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	122	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	102	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	90.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	84.8	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	76.9	69.2	143

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	118	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	101	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	122	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	100.0	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	117	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	93.5	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	95.5	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	81.5	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	91.3	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	106	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	104	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	115	72.0	130



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027) - continued							
ES2532712-002	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	95.1	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	117	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	122	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	110	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	90.8	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	81.2	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	92.2	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	93.2	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	98.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	122	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	113	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	118	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	107	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	87.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	111	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	96.9	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	91.2	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	93.9	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532716	Page	: 1 of 5
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 4	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.2	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532712--001	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_SD333_251013	13-Oct-2025	----	----	----	24-Oct-2025	27-Oct-2025	✓
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_SD333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_SD333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_SD333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	23-Oct-2025	01-Dec-2025	✓

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation



Matrix: WATER		Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.					
Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_SW333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_SW333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_SW333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW333_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	12	16.67	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✔	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532717

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.2

C-O-C number : 89418
Site : Offsite 3
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10
Client Requested Due : 28-Oct-2025
Date

Issue Date : 21-Oct-2025
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Not Available
Temperature : 3.0°C - Ice present
No. of samples received / analysed : 8 / 8

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - EP231X (solids) PFAS - Full Suite (30 analytes)
ES2532717-007	13-Oct-2025 12:30	0908_SD600_251013	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532717-001	13-Oct-2025 12:44	0908_MW142D_251013		✓
ES2532717-002	13-Oct-2025 12:40	0908_MW142S_251013		✓
ES2532717-003	13-Oct-2025 13:34	0908_MW144_251013		✓
ES2532717-004	13-Oct-2025 12:59	0908_MW536_251013		✓
ES2532717-005	13-Oct-2025 13:11	0908_MW537_251013		✓
ES2532717-006	13-Oct-2025 13:49	0908_MW538_251013		✓
ES2532717-008	13-Oct-2025 12:29	0908_SW600_251013	✓	

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

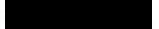
[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email



 CHAIN OF CUSTODY COC#: 89418 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED BY:  DATE TIME: 24/12/24 13:30	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFSOMP_25 SITE: Offsite 3 ORDER NO: 60739111_1.10.2 PROJECT MANAGER:  PRIMARY SAMPLER:  EMAIL REPORTS TO: 		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:	
		CONTACT PH: SAMPLER MOBILE:  QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012			

SAMPLE DETAILS							ANALYSIS REQUIRED					Environmental Division Sydney Work Order Reference ES2532717  Telephone : + 61-2-8784 8555
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Soil PFAS Full Suite Standard Level LOR SOIL	Water PFAS Full Suite Low Level WATER	Water PFAS Full Suite Standard Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION	
001	0908_MW142D_251013		13/10/2025 12:44 PM	WATER	ALS: 4 Non ALS: 0	No		X				
002	0908_MW142S_251013		13/10/2025 12:40 PM	WATER	ALS: 4 Non ALS: 0	No		X				
003	0908_MW144_251013		13/10/2025 01:34 PM	WATER	ALS: 4 Non ALS: 0	No		X				
004	0908_MW536_251013		13/10/2025 12:59 PM	WATER	ALS: 4 Non ALS: 0	No		X				
005	0908_MW537_251013		13/10/2025 01:11 PM	WATER	ALS: 4 Non ALS: 0	No		X				
006	0908_MW538_251013		13/10/2025 01:49 PM	WATER	ALS: 4 Non ALS: 0	No		X				
007	0908_SD600_251013		13/10/2025 12:30 PM	SOIL	ALS: 1 Non ALS: 0	No	X					



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Soil PFAS Full Suite Standard Level LOR SOIL	Water PFAS Full Suite Low Level WATER	Water PFAS Full Suite Standard Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
008	0908_SW600_251013		13/10/2025 12:29 PM	WATER	ALS: 4 Non ALS: 0	No			X		



ALS Laboratory: ES Sydney
Environmental

RECEIVED BY:

DATE TIME:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW142D_251013	HDPE (no PTFE)	20 mL	00352504023294	Grey	No	
001	0908_MW142D_251013	HDPE (no PTFE)	20 mL	00352504023132	Grey	No	
001	0908_MW142D_251013	HDPE (no PTFE)	20 mL	00352504023220	Grey	No	
001	0908_MW142D_251013	HDPE (no PTFE)	20 mL	00352504023330	Grey	No	
002	0908_MW142S_251013	HDPE (no PTFE)	20 mL	00352504030582	Grey	No	
002	0908_MW142S_251013	HDPE (no PTFE)	20 mL	00352504023245	Grey	No	
002	0908_MW142S_251013	HDPE (no PTFE)	20 mL	00352504023092	Grey	No	
002	0908_MW142S_251013	HDPE (no PTFE)	20 mL	00352504023127	Grey	No	
003	0908_MW144_251013	HDPE (no PTFE)	20 mL	00352504026638	Grey	No	
003	0908_MW144_251013	HDPE (no PTFE)	20 mL	00352504026687	Grey	No	
003	0908_MW144_251013	HDPE (no PTFE)	20 mL	00352504013761	Grey	No	
003	0908_MW144_251013	HDPE (no PTFE)	20 mL	00352504026671	Grey	No	
004	0908_MW536_251013	HDPE (no PTFE)	20 mL	00352504016054	Grey	No	
004	0908_MW536_251013	HDPE (no PTFE)	20 mL	00352504026689	Grey	No	
004	0908_MW536_251013	HDPE (no PTFE)	20 mL	00352504026643	Grey	No	
004	0908_MW536_251013	HDPE (no PTFE)	20 mL	00352504026686	Grey	No	
005	0908_MW537_251013	HDPE (no PTFE)	20 mL	00352504023289	Grey	No	
005	0908_MW537_251013	HDPE (no PTFE)	20 mL	00352504023308	Grey	No	
005	0908_MW537_251013	HDPE (no PTFE)	20 mL	00352504023145	Grey	No	
005	0908_MW537_251013	HDPE (no PTFE)	20 mL	00352504023062	Grey	No	
006	0908_MW538_251013	HDPE (no PTFE)	20 mL	00352504023193	Grey	No	
006	0908_MW538_251013	HDPE (no PTFE)	20 mL	00352504023264	Grey	No	
006	0908_MW538_251013	HDPE (no PTFE)	20 mL	00352504023192	Grey	No	
006	0908_MW538_251013	HDPE (no PTFE)	20 mL	00352504023017	Grey	No	
007	0908_SD600_251013	HDPE Soil Jar	200 mL	00621223061417	Grey	No	
008	0908_SW600_251013	HDPE (no PTFE)	20 mL	00352504023105	Grey	No	



COC#: 89418

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW 0908 PFASOMP 25

SITE: Offsite 3

ORDER NO: 60739111_1.10.2

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

C

Other comments:

008	0908_SW600_251013	HDPE (no PTFE)	20 mL	00352504023027	Grey	No	
008	0908_SW600_251013	HDPE (no PTFE)	20 mL	00352504023281	Grey	No	
008	0908_SW600_251013	HDPE (no PTFE)	20 mL	00352504023123	Grey	No	

Total Bottle Count: ALS: 29, Non ALS: 0

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 89418 # Samples: 8 Sampler: [REDACTED]
Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
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CERTIFICATE OF ANALYSIS

Work Order : **ES2532717**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89418**
Sampler : **[REDACTED]**
Site : **Offsite 3**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **8**
No. of samples analysed : **8**

Page : 1 of 13
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **22-Oct-2025**
Issue Date : **27-Oct-2025 15:32**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231: Stable isotope enriched internal standards are added to samples prior to extraction. Target compounds have a direct analogous internal standard with the exception of PFPeS, PFHpA, PFDS, PFTrDA and 10:2 FTS. These compounds use an internal standard that is chemically related and has a retention time close to that of the target compound. The DQO for internal standard response is 50-150% of that established at initial calibration or as per USEPA 1633 limits where listed. PFOS is quantified using a certified, traceable standard consisting of linear and branched PFOS isomers. These practices are in line with recommendations in the National Environmental Management Plan for PFAS and also conform to QSM 5.4 (US DoD) requirements.

Sub-Matrix: **GROUNDWATER**
(Matrix: **WATER**)

0908_MW142D_25101

0908_MW142S_25101

0908_MW144_251013

0908_MW536_251013

0908_MW537_251013

Sampling date / time

13-Oct-2025 12:44

13-Oct-2025 12:40

13-Oct-2025 13:34

13-Oct-2025 12:59

13-Oct-2025 13:11

Compound

CAS Number

LOR

Unit

ES2532717-001

ES2532717-002

ES2532717-003

ES2532717-004

ES2532717-005

Results

Res

Results

Res

Res

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.034	<0.002	<0.002
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.033	<0.002	<0.002
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.087	0.013	0.035
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.008	<0.002	<0.002
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.189	0.009	0.039
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.012	<0.002	<0.002
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.003	<0.002	0.003
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.006	<0.002	0.005
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW142D_25101 3	0908_MW142S_25101 3	0908_MW144_251013	0908_MW536_251013	0908_MW537_251013
Sampling date / time				13-Oct-2025 12:44	13-Oct-2025 12:40	13-Oct-2025 13:34	13-Oct-2025 12:59	13-Oct-2025 13:11
Compound	CAS Number	LOR	Unit	ES2532717-001	ES2532717-002	ES2532717-003	ES2532717-004	ES2532717-005
				Result	Result	Result	Result	Result
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	<0.002	0.372	0.022	0.082
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	<0.002	0.276	0.022	0.074
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	<0.002	0.331	0.022	0.082
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	88.7	94.8	93.4	94.3	96.5
13C8-PFOA	----	0.002	%	96.6	96.8	91.6	98.6	91.1



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW538_251013

Sampling date / time

13-Oct-2025 13:49

Compound

CAS Number

LOR

Unit

ES2532717-006

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	0.02	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.047	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	0.031	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.258	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	0.008	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.290	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.02	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.012	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.057	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	0.008	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.014	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTriDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW538_251013

Sampling date / time

13-Oct-2025 13:49

Compound

CAS Number

LOR

Unit

ES2532717-006

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.765	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.548	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.706	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	92.9	----	----	----	----
13C8-PFOA	----	0.002	%	92.1	----	----	----	----



Analytical Results

Sub-Matrix: SEDIMENT
 (Matrix: SOIL)

Sample ID

0908_SD600_251013

Sampling date / time

13-Oct-2025 12:30

Compound

CAS Number

LOR

Unit

ES2532717-007

Result

EA055: Moisture Content (Dried @ 105-110°C)

Moisture Content

0.1

%

36.6

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid
(PFPrS)

423-41-6

0.0005

mg/kg

<0.0005

Perfluorobutane sulfonic acid
(PFBS)

375-73-5

0.0002

mg/kg

0.0002

Perfluoropentane sulfonic acid
(PFPeS)

2706-91-4

0.0002

mg/kg

0.0003

Perfluorohexane sulfonic acid
(PFHxS)

355-46-4

0.0002

mg/kg

0.0039

Perfluoroheptane sulfonic acid
(PFHpS)

375-92-8

0.0002

mg/kg

0.0006

Perfluorooctane sulfonic acid
(PFOS)

1763-23-1

0.0002

mg/kg

0.0395

Perfluorononane sulfonic acid
(PFNS)

68259-12-1

0.0002

mg/kg

0.0002

Perfluorodecane sulfonic acid
(PFDS)

335-77-3

0.0002

mg/kg

<0.0002

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)

375-22-4

0.001

mg/kg

<0.001

Perfluoropentanoic acid (PFPeA)

2706-90-3

0.0002

mg/kg

0.0002

Perfluorohexanoic acid (PFHxA)

307-24-4

0.0002

mg/kg

0.0012

Perfluoroheptanoic acid (PFHpA)

375-85-9

0.0002

mg/kg

0.0005

Perfluorooctanoic acid (PFOA)

335-67-1

0.0002

mg/kg

0.0010

Perfluorononanoic acid (PFNA)

375-95-1

0.0002

mg/kg

<0.0002

Perfluorodecanoic acid (PFDA)

335-76-2

0.0002

mg/kg

<0.0002

Perfluoroundecanoic acid

2058-94-8

0.0002

mg/kg

<0.0002

(PFUnDA)

Perfluorododecanoic acid

307-55-1

0.0002

mg/kg

<0.0002

(PFDoDA)

Perfluorotridecanoic acid

72629-94-8

0.0002

mg/kg

<0.0002

(PFTrDA)

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD600_251013		----	----	----	----
Sampling date / time					13-Oct-2025 12:30		----	----	----	----
Compound	CAS Number	LOR	Unit		ES2532717-007		-----	-----	-----	-----
					Result		----	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids - Continued										
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg		<0.0005		----	----	----	----
EP231C: Perfluoroalkyl Sulfonamides										
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg		<0.0002		----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg		<0.0005		----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg		<0.0005		----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg		<0.0005		----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg		<0.0005		----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg		<0.0002		----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg		<0.0002		----	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids										
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg		<0.0005		----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg		<0.0005		----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg		<0.0005		----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg		<0.0005		----	----	----	----
EP231P: PFAS Sums										
Sum of PFAS	----	0.0002	mg/kg		0.0476		----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.0002	mg/kg		0.0434		----	----	----	----
Sum of PFAS (WA DER List)	----	0.0002	mg/kg		0.0465		----	----	----	----
EP231S: PFAS Surrogate										



Analytical Results

Sub-Matrix: SEDIMENT (Matrix: SOIL)				Sample ID	0908_SD600_251013	----	----	----	----
				Sampling date / time	13-Oct-2025 12:30	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2532717-007	-----	-----	-----	-----
				Result		----	----	----	----
EP231S: PFAS Surrogate - Continued									
13C4-PFOS	----	0.0002	%		94.8	----	----	----	----
13C8-PFOA	----	0.0002	%		98.8	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW600_251013

Sampling date / time

13-Oct-2025 12:29

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2532717-008

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	0.07	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.17	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.23	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	2.39	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.24	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	5.38	----	----	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.10	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.49	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.10	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.21	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SURFACE WATER
 (Matrix: WATER)

Sample ID

0908_SW600_251013

Sampling date / time

13-Oct-2025 12:29

Compound

CAS Number

LOR

Unit

ES2532717-008

Result

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluorohexadecanoic acid
 (PFHxDA)

67905-19-5

0.05

µg/L

<0.05

EP231C: Perfluoroalkyl Sulfonamides

Perfluorooctane sulfonamide
 (FOSA)

754-91-6

0.02

µg/L

<0.02

N-Methyl perfluorooctane
 sulfonamide (MeFOSA)

31506-32-8

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamide (EtFOSA)

4151-50-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoethanol (MeFOSE)

24448-09-7

0.05

µg/L

<0.05

N-Ethyl perfluorooctane
 sulfonamidoethanol (EtFOSE)

1691-99-2

0.05

µg/L

<0.05

N-Methyl perfluorooctane
 sulfonamidoacetic acid
 (MeFOSAA)

2355-31-9

0.02

µg/L

<0.02

N-Ethyl perfluorooctane
 sulfonamidoacetic acid
 (EtFOSAA)

2991-50-6

0.02

µg/L

<0.02

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid
 (4:2 FTS)

757124-72-4

0.05

µg/L

<0.05

6:2 Fluorotelomer sulfonic acid
 (6:2 FTS)

27619-97-2

0.05

µg/L

<0.05

8:2 Fluorotelomer sulfonic acid
 (8:2 FTS)

39108-34-4

0.05

µg/L

<0.05

10:2 Fluorotelomer sulfonic acid
 (10:2 FTS)

120226-60-0

0.05

µg/L

<0.05

EP231P: PFAS Sums

Sum of PFAS

0.01

µg/L

9.38

Sum of PFHxS and PFOS

355-46-4/1763-23-

0.01

µg/L

7.77

Sum of PFAS (WA DER List)

0.01

µg/L

8.84

EP231S: PFAS Surrogate



Analytical Results

Sub-Matrix: SURFACE WATER (Matrix: WATER)			Sample ID	0908_SW600_251013	----	----	----	----
			Sampling date / time	13-Oct-2025 12:29	----	----	----	----
Compound	CAS Number	LOR	Unit	ES2532717-008	-----	-----	-----	-----
				Result	----	----	----	----
EP231S: PFAS Surrogate - Continued								
13C4-PFOS	----	0.02	%	94.7	----	----	----	----
13C8-PFOA	----	0.02	%	96.5	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532717	Page	: 1 of 16
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 22-Oct-2025
C-O-C number	: 89418	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 3		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 8		
No. of samples analysed	: 8		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6953485)									
ES2532694-016	Anonymous	EA055: Moisture Content	----	0.1	%	36.0	35.0	2.6	0% - 20%
ES2532713-003	Anonymous	EA055: Moisture Content	----	0.1	%	16.5	17.3	4.5	0% - 20%
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	0.0014	0.0015	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0333	0.0350	5.0	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	0.0207	0.0225	8.5	0% - 20%
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101)									



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6947101) - continued									
ES2532712-001	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	0.0008	0.0008	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0006	0.0008	23.3	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	0.0003	<0.0002	0.0	No Limit
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	0.0005	0.0005	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	0.0010	0.0011	10.2	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	0.0008	0.0005	43.4	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	0.0016	0.0018	7.1	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	0.0003	0.0003	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005 (0.0006)*	mg/kg	0.0008	<0.0006	19.6	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	<0.001	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6947101) - continued									
ES2532741-004	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	0.0020	0.0026	28.4	0% - 50%
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	<0.0002	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005 (0.0006)*	mg/kg	<0.0006	<0.0006	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6947101)									
ES2532712-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
ES2532741-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.0005	mg/kg	0.0132	0.0134	1.0	0% - 20%
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.0005	mg/kg	0.0005	<0.0005	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949027) - continued									
ES2532713-005	Anonymous	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	0.78	0.74	5.3	0% - 20%
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	1.29	1.25	2.9	0% - 20%
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	0.06	0.05	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	0.07	0.06	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.034	0.031	7.8	0% - 50%
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	0.009	0.008	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.080	0.084	5.0	0% - 20%
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	0.006	0.007	15.2	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.029	0.027	6.6	0% - 50%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	0.02	0.02	0.0	No Limit
ES2532717-004	0908_MW536_251013	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.013	0.009	38.4	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.009	0.008	13.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949027) - continued									
ES2532671-001	Anonymous	EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDODA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	0.06	0.06	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	0.15	0.15	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	0.02	0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDODA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.275	0.284	3.4	0% - 20%
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.708	0.723	2.0	0% - 20%
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	0.068	0.070	2.0	0% - 20%
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.034	0.035	3.9	0% - 50%
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	0.002	0.003	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDODA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.12	0.12	0.0	0% - 50%
ES2532717-004	0908_MW536_251013	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949528) - continued									
ES2532717-004	0908_MW536_251013	EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528) - continued									
ES2532676-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532717-004	0908_MW536_251013	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
ES2532713-005	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949027) - continued									
ES2532713-005	Anonymous	EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005 (0.008) *	µg/L	1.86	1.67	10.4	0% - 20%
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	0.016	0.018	9.9	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532717-004	0908_MW536_251013	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6949027)									
ES2532671-001	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit
ES2532713-005	Anonymous	EP231X: Sum of PFAS	----	0.01	µg/L	2.51	2.43	3.2	0% - 20%



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)								
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.0005	mg/kg	<0.0005	0.00125 mg/kg	113	70.0	130
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.0002	mg/kg	<0.0002	0.00125 mg/kg	105	72.0	128
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	73.0	123
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	67.0	130
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	98.6	70.0	132
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.6	68.0	136
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	99.4	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.001	mg/kg	<0.001	0.00625 mg/kg	102	71.0	135
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.0002	mg/kg	<0.0002	0.00125 mg/kg	106	69.0	132
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.0002	mg/kg	<0.0002	0.00125 mg/kg	107	70.0	132
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	103	71.0	131
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	101	69.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	108	72.0	129
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.0002	mg/kg	<0.0002	0.00125 mg/kg	122	69.0	133
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	97.7	64.0	136
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.0002	mg/kg	<0.0002	0.00125 mg/kg	117	69.0	135
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.0002	mg/kg	<0.0002	0.00125 mg/kg	113	66.0	139
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	126	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	84.0	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0005	mg/kg	<0.0005	0.00312 mg/kg	124	71.6	129
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	103	69.8	131
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0005	mg/kg	<0.0005	0.00312 mg/kg	116	68.7	130
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0005	mg/kg	<0.0005	0.00312 mg/kg	127	65.1	134
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.0002	mg/kg	<0.0002	0.00125 mg/kg	114	63.0	144
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.0002	mg/kg	<0.0002	0.00125 mg/kg	93.0	61.0	139



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report					
Method: <i>Compound</i>		CAS Number	LOR		Unit	Spike Concentration	Spike Recovery (%)		Acceptable Limits (%)	
							LCS	Low	High	
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)										
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)		757124-72-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	101	62.0	145	
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)		27619-97-2	0.0005	mg/kg	<0.0005	0.00125 mg/kg	86.2	64.0	140	
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)		39108-34-4	0.0005	mg/kg	<0.0005	0.00125 mg/kg	88.8	65.0	137	
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)		120226-60-0	0.0005	mg/kg	<0.0005	0.00125 mg/kg	90.5	69.2	143	

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Acceptable Limits (%)	
						Concentration	LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)									
EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	0.25 µg/L	115	70.0	130	
EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	0.25 µg/L	109	72.0	130	
EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	0.25 µg/L	116	71.0	127	
EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	0.25 µg/L	116	68.0	131	
EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	0.25 µg/L	111	69.0	134	
EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	0.25 µg/L	90.3	65.0	140	
EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	0.25 µg/L	94.4	70.0	130	
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	0.25 µg/L	91.4	53.0	142	
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949528)									
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	119	70.0	130	
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	130	
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	98.0	71.0	127	
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	128	68.0	131	
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	120	69.0	134	
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	114	65.0	140	
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	77.6	53.0	142	
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027)									
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	102	73.0	129	
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	113	72.0	129	
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	122	72.0	129	
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	116	72.0	130	
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.5	71.0	133	
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	115	69.0	130	
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	129	71.0	129	
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	108	69.0	133	
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	95.7	72.0	134	



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949027) - continued								
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	93.4	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	97.1	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	97.6	62.9	136
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	98.1	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	121	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	97.1	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	123	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	108	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	90.4	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	123	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	128	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	108	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	110	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	111	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	97.5	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	116	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	105	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	109	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	84.8	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	109	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	127	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	110	72.3	128



Sub-Matrix: **WATER**

Method: Compound CAS Number LOR Unit				Method Blank (MB) Report Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
							Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	117	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	102	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	92.2	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	89.3	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	74.8	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	81.2	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.5	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	77.2	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	77.8	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.00125 mg/kg	117	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.00125 mg/kg	109	72.0	128
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.00125 mg/kg	101	73.0	123
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.00125 mg/kg	92.1	67.0	130
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.00125 mg/kg	103	70.0	132
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.00125 mg/kg	# Not Determined	68.0	136
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.00125 mg/kg	96.0	70.0	130
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.00125 mg/kg	94.6	59.0	134
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.00625 mg/kg	102	71.0	135
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.00125 mg/kg	110	69.0	132



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6947101) - continued							
ES2532712-001	Anonymous	EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.00125 mg/kg	106	70.0	132
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.00125 mg/kg	102	71.0	131
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.00125 mg/kg	112	69.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.00125 mg/kg	115	72.0	129
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.00125 mg/kg	125	69.0	133
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.00125 mg/kg	101	64.0	136
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.00125 mg/kg	120	69.0	135
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.00125 mg/kg	97.3	66.0	139
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.00312 mg/kg	133	69.0	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.00125 mg/kg	90.4	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.00312 mg/kg	118	71.6	129
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.00312 mg/kg	117	69.8	131
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.00312 mg/kg	122	68.7	130
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.00312 mg/kg	127	65.1	134
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.00125 mg/kg	122	63.0	144
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.00125 mg/kg	102	61.0	139
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6947101)							
ES2532712-001	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.00125 mg/kg	90.5	62.0	145
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.00125 mg/kg	104	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.00125 mg/kg	84.8	65.0	137
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.00125 mg/kg	76.9	69.2	143

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	118	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	101	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	122	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	100.0	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	117	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	93.5	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	95.5	70.0	130

Matrix Spike (MS) Report

EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027)



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949027) - continued							
ES2532712-002	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	98.2	67.0	137
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	122	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	113	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	118	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	107	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	87.1	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	99.0	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	110	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	96.0	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	105	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	111	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	117	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	90.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949027)							
ES2532712-002	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	111	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	96.9	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	91.2	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	93.9	71.4	144
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	91.8	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	# Not Determined	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	86.9	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	81.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532717	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 3	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 8
Order number	: 60739111_1.10.2	No. of samples analysed	: 8

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- NO Method Blank value outliers occur.
- NO Duplicate outliers occur.
- NO Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, NO surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- NO Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- NO Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231A: Perfluoroalkyl Sulfonic Acids	ES2532712--001	Anonymous	Perfluorooctane sulfonic acid (PFOS)	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluoropentanoic acid (PFPeA)	2706-90-3	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2532676--002	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
HDPE Soil Jar (EA055) 0908_SD600_251013	13-Oct-2025	----	----	----	24-Oct-2025	27-Oct-2025	✔
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD600_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE Soil Jar (EP231X) 0908_SD600_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔



Matrix: **SOIL**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231C: Perfluoroalkyl Sulfonamides							
HDPE Soil Jar (EP231X) 0908_SD600_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE Soil Jar (EP231X) 0908_SD600_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔
EP231P: PFAS Sums							
HDPE Soil Jar (EP231X) 0908_SD600_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	23-Oct-2025	01-Dec-2025	✔

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_SW600_251013		13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW142D_251013, 0908_MW144_251013, 0908_MW537_251013,	0908_MW142S_251013, 0908_MW536_251013, 0908_MW538_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X) 0908_SW600_251013		13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW142D_251013, 0908_MW144_251013, 0908_MW537_251013,	0908_MW142S_251013, 0908_MW536_251013, 0908_MW538_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X) 0908_SW600_251013		13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW142D_251013, 0908_MW144_251013, 0908_MW537_251013,	0908_MW142S_251013, 0908_MW536_251013, 0908_MW538_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X) 0908_SW600_251013		13-Oct-2025	22-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW142D_251013, 0908_MW144_251013, 0908_MW537_251013,	0908_MW142S_251013, 0908_MW536_251013, 0908_MW538_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✔	24-Oct-2025	11-Apr-2026	✔

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_SW600_251013	13-Oct-2025	22-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓
HDPE (no PTFE) (EP231X-LL) 0908_MW142D_251013, 0908_MW144_251013, 0908_MW537_251013, 0908_MW142S_251013, 0908_MW536_251013, 0908_MW538_251013	13-Oct-2025	23-Oct-2025	11-Apr-2026	✓	24-Oct-2025	11-Apr-2026	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	12	16.67	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	12	8.33	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	SOIL	In-house: Analysis of soils by solvent extraction followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. A portion of homogenised sample is extracted along with isotope dilution standards (where commercially available) in a solution of ammonium acetate in acetonitrile/methanol. Where relevant, interferences from co-extracted organics are removed using dispersive clean-up media (dSPE). A portion of extract is combined with an equal volume of reagent water and filtered for instrumental analysis.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
QuEChERS Extraction of Solids	ORG71	SOIL	In house: Sequential extractions with Acetonitrile/Methanol by shaking. Extraction efficiency aided by the addition of salts under acidic conditions. Where relevant, interferences from co-extracted organics are removed with dispersive clean-up media (dSPE). The extract is either diluted or concentrated and exchanged into the analytical solvent.
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532721

Client : AECOM AUSTRALIA PTY LTD
Contact :
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail :
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.2

C-O-C number : 89408
Site : Offsite 12
Sampler :

Laboratory : Environmental Division Sydney
Contact :
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail :
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10
Client Requested Due : 28-Oct-2025
Date

Issue Date : 21-Oct-2025
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Not Available
Temperature : 3.0°C - Ice present
No. of samples received / analysed : 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532721-001	16-Oct-2025 11:51	0908_MW266S_251016	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

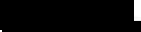
[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
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	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
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	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
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	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
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	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email



 CHAIN OF CUSTODY COC#: 89408 ALS Laboratory: ES Sydney Environmental		RELINQUISHED BY: DATE TIME:	RECEIVED  DATE TIME: 21/10/24 9:30	RELINQUISHED BY: DATE TIME:	RECEIVED BY: DATE TIME:																															
CLIENT: AECOMAU - AECOM Australia Pty Ltd PROJECT: NSW_0908_PFASOMP_25 SITE: Offsite 12 ORDER NO: 60739111_1.10.2 PROJECT MANAGER:  PRIMARY SAMPLER:  EMAIL REPORTS TO: 		TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:																																
<table><thead><tr><th colspan="7">SAMPLE DETAILS</th><th colspan="3">ANALYSIS REQUIRED</th></tr><tr><th>SAMPLE</th><th>NAME</th><th>DESCRIPTION</th><th>DATE / TIME</th><th>MATRIX</th><th>TOTAL BOTTLES</th><th>ON HOLD</th><th>Water PFAS Full Suite Low Level WATER</th><th>ALTERNATIVE ANALYSIS</th><th>ADDITIONAL INFORMATION</th></tr></thead><tbody><tr><td>001</td><td>0908_MW266S_251016</td><td></td><td>16/10/2025 11:51 AM</td><td>WATER</td><td>ALS: 4 Non ALS: 0</td><td>No</td><td>X</td><td></td><td></td></tr></tbody></table>							SAMPLE DETAILS							ANALYSIS REQUIRED			SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Water PFAS Full Suite Low Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION	001	0908_MW266S_251016		16/10/2025 11:51 AM	WATER	ALS: 4 Non ALS: 0	No	X		
SAMPLE DETAILS							ANALYSIS REQUIRED																													
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001	0908_MW266S_251016		16/10/2025 11:51 AM	WATER	ALS: 4 Non ALS: 0	No	X																													

Environmental Division
Sydney
Work Order Reference
ES2532721



Telephone : +61-2-8784 8555



COC#: 89408

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW 0908 PFASOMP 25

SITE: Offsite 12

ORDER NO: 60739111 1.10.2

PROJECT MANAGER:

PRIMARY SAMPLER:

CONTACT PH:

SAMPLER MOBILE:

QUOTE NO: ES24AECOMAU0012 V3 / ES2024AECOMAU0012

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

©

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_MW266S_251016	HDPE (no PTFE)	20 mL	00352504026605	Grey	No	
001	0908_MW266S_251016	HDPE (no PTFE)	20 mL	00352504026719	Grey	No	
001	0908_MW266S_251016	HDPE (no PTFE)	20 mL	00352504026612	Grey	No	
001	0908_MW266S_251016	HDPE (no PTFE)	20 mL	00352504026683	Grey	No	

Total Bottle Count: ALS: 4, Non ALS: 0

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
Phone: ([REDACTED])

ALS Compass COC Reference: 89408 # Samples: 1 Sampler: [REDACTED]
Phone: ([REDACTED])

Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILED

LAB OF ORIGIN.
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>1610</u> <u>1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>1610</u> <u>1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
---	---	---	--



CERTIFICATE OF ANALYSIS

Work Order : **ES2532721**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89408**
Sampler : **[REDACTED]**
Site : **Offsite 12**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **1**
No. of samples analysed : **1**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **23-Oct-2025**
Issue Date : **27-Oct-2025 15:40**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW266S_25101
6

Sampling date / time

16-Oct-2025 11:51

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2532721-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.005	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.008	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_MW266S_25101
6

Sampling date / time

16-Oct-2025 11:51

Compound CAS Number LOR Unit

ES2532721-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	0.011	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	0.024	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	0.013	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	0.024	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	90.5	----	----	----	----
13C8-PFOA	----	0.002	%	100	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532721	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 23-Oct-2025
C-O-C number	: 89408	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 12		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504) - continued									
ES2532710-001	Anonymous	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	107	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.4	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	99.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	106	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	89.4	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	95.6	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	82.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	102	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	112	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	91.6	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	100	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	119	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	122	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	115	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	113	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	92.2	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	92.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	114	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	108	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	105	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	101	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	98.4	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	103	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	127	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	119	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	90.4	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	94.7	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	94.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	84.2	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	83.0	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	79.1	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	73.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	99.5	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	124	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	104	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	91.8	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	97.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	99.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	127	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	116	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	116	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	97.4	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	91.3	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	95.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	101	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued							
ES2532715-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	104	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	107	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	104	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	112	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	95.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	109	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	114	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	124	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	76.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532721	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 12	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.2	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results. This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein. Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters. Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: WATER

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_MW266S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532722

Client : AECOM AUSTRALIA PTY LTD
Contact : [REDACTED]
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.2

C-O-C number : 89410
Site : Offsite 10
Sampler : [REDACTED]

Laboratory : Environmental Division Sydney
Contact : [REDACTED]
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10
Client Requested Due : 28-Oct-2025
Date

Issue Date : 21-Oct-2025
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Intact.
Temperature : 3.0°C - Ice present
No. of samples received / analysed : 1 / 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532722-001	16-Oct-2025 10:24	0908_POT365_251016	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email





CHAIN OF CUSTODY

COC#: 89410

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

RELINQUISHED BY:

DATE TIME:

RECEIVED BY:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 10

ORDER NO: 60739111_1.10.2

PROJECT MANAGER:

PRIMARY SAMPLER:

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

CONTACT PH:

QUOTE NO: ES24AECOMAU0012 V3

SAMPLER MOBILE:

/ ES2024AECOMAU001
2

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE DETAILS

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Water PFAS Full Suite Low Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_POT365_251016		16/10/2025 10:24 AM	WATER	ALS: 4 Non ALS: 0	No	X		

ANALYSIS REQUIRED

Environmental Division
Sydney

Work Order Reference
ES2532722



Telephone : - 61-2-8784 8555



CHAIN OF CUSTODY

COC#: 89410

ALS Laboratory: ES Sydney
Environmental

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

DATE TIME:

DATE TIME:

DATE TIME:

DATE TIME:

CLIENT: AECOMAU - AECOM Australia Pty Ltd

PROJECT: NSW_0908_PFASOMP_25

SITE: Offsite 10

ORDER NO: 60739111_1.10.2

PROJECT MANAGER:

CONTACT PH:

SAMPLER MOBILE:

PRIMARY SAMPLER:

QUOTE NO: ES24AECOMAU0012 V3

/ ES2024AECOMAU001

2

EMAIL REPORTS TO:

TURNAROUND REQUIREMENTS : 5 Days

Biohazard info:

LABORATORY USE ONLY (Circle)

Custody Seal intact?

Yes No N/A

Free ice / frozen ice bricks present upon receipt?

Yes No N/A

Random Sample Temperature on Receipt:

°C

Other comments:

SAMPLE	SAMPLE NAME	BOTTLE NAME	VOLUME	BARCODE	TYPE	FILTERED	REASON
001	0908_POT365_251016	HDPE (no PTFE)	20 mL	00352504016059	Grey	No	
001	0908_POT365_251016	HDPE (no PTFE)	20 mL	00352504026726	Grey	No	
001	0908_POT365_251016	HDPE (no PTFE)	20 mL	00352504026608	Grey	No	
001	0908_POT365_251016	HDPE (no PTFE)	20 mL	00352504026690	Grey	No	

Total Bottle Count: ALS: 4, Non ALS: 0

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
 ALS Compass COC Reference: 89410 # Samples: 1 Sampler: [REDACTED]
 Phone: [REDACTED] Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
 Free ice / frozen ice bricks upon receipt? YES NO N/A
 Random sample temperature on receipt? 3 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
---	--	--	--



CERTIFICATE OF ANALYSIS

Work Order : **ES2532722**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89410**
Sampler : **[REDACTED]**
Site : **Offsite 10**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **1**
No. of samples analysed : **1**

Page : **1 of 5**
Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **23-Oct-2025**
Issue Date : **27-Oct-2025 15:39**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT365_25101
6

Sampling date / time

16-Oct-2025 10:24

Compound	CAS Number	LOR	Unit
----------	------------	-----	------

ES2532722-001

Result

EP231A: Perfluoroalkyl Sulfonic Acids

Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	----	----	----

EP231B: Perfluoroalkyl Carboxylic Acids

Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

0908_POT365_25101
6

Sampling date / time

16-Oct-2025 10:24

Compound CAS Number LOR Unit

ES2532722-001

Result

EP231C: Perfluoroalkyl Sulfonamides - Continued

Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	----	----	----

EP231D: (n:2) Fluorotelomer Sulfonic Acids

4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	----	----	----

EP231P: PFAS Sums

Sum of PFAS	----	0.002	µg/L	<0.002	----	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	----	----	----

EP231S: PFAS Surrogate

13C4-PFOS	----	0.002	%	96.1	----	----	----	----
13C8-PFOA	----	0.002	%	105	----	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532722	Page	: 1 of 6
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 23-Oct-2025
C-O-C number	: 89410	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 10		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 1		
No. of samples analysed	: 1		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6951504) - continued									
ES2532710-001	Anonymous	EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6951504)									
ES2532710-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	107	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	93.4	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	99.6	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	106	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	89.4	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	95.6	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	82.2	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	102	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	112	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	103	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	91.6	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	100	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	119	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	122	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	115	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	113	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	92.2	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	92.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	101	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	114	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	108	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	105	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	101	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	98.4	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	103	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	127	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	119	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	90.4	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	94.7	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	94.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	84.2	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	83.0	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	79.1	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.6	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	73.4	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	99.5	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	124	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	104	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	91.8	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	97.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	99.4	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	127	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	116	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	116	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	97.4	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	91.3	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	95.0	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	101	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6951504) - continued							
ES2532715-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	104	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	107	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	104	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	112	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	101	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	95.2	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6951504)							
ES2532715-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	109	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	114	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	124	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	76.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532722	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 10	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 1
Order number	: 60739111_1.10.2	No. of samples analysed	: 1

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results. This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein. Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters. Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X-LL) 0908_POT365_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✔	27-Oct-2025	14-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	10.00	✔	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	1	7	14.29	5.00	✔	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : ES2532723

Client : AECOM AUSTRALIA PTY LTD
Contact : [REDACTED]
Address : 17 WARABROOK BLVD
NEWCASTLE Newcastle 2304

E-mail : [REDACTED]
Telephone : ----
Facsimile : ----

Project : NSW_0908_PFASOMP_25
Order number : 60739111_1.10.2

C-O-C number : 89413
Site : Offsite 11
Sampler : [REDACTED]

Laboratory : Environmental Division Sydney
Contact : [REDACTED]
Address : 277-289 Woodpark Road Smithfield
NSW Australia 2164

E-mail : [REDACTED]
Telephone : +61 2 8784 8555
Facsimile : +61-2-8784 8500

Page : 1 of 4
Quote number : ES2024AECOMAU0012
(NSW_PFASOMP_25)
QC Level : NEPM 2013 B3 & ALS QC Standard

Dates

Date Samples Received : 16-Oct-2025 14:10
Client Requested Due : 28-Oct-2025
Date

Issue Date : 21-Oct-2025
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : Undefined
No. of coolers/boxes : 1
Receipt Detail :

Security Seal : Not Available
Temperature : 3.0°C - Ice present
No. of samples received / analysed : 2 / 2

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532723-001	16-Oct-2025 10:41	0908_MW270D_251016	✓
ES2532723-002	16-Oct-2025 10:51	0908_MW270S_251016	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

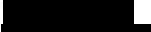
[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email



 CHAIN OF CUSTODY COC#: 89413 ALS Laboratory: ES Sydney Environmental	RELINQUISHED BY:	RECEIVED 	RELINQUISHED BY:	RECEIVED BY:
	DATE TIME:	DATE TIME: 21/10/25 9:30	DATE TIME:	DATE TIME:
CLIENT: AECOMAU - AECOM Australia Pty Ltd	TURNAROUND REQUIREMENTS : 5 Days Biohazard info:		LABORATORY USE ONLY (Circle) Custody Seal intact? Yes No N/A Free ice / frozen ice bricks present upon receipt? Yes No N/A Random Sample Temperature on Receipt: °C Other comments:	
PROJECT: NSW_0908_PFASOMP_25				
SITE: Offsite 11				
ORDER NO: 60739111_1.10.2				
PROJECT MANAGER: 	CONTACT PH:	SAMPLER MOBILE: 		
PRIMARY SAMPLER: 	QUOTE NO: ES24AECOMAU0012 V3	/ ES2024AECOMAU0012		
EMAIL REPORTS TO: 				

SAMPLE DETAILS							ANALYSIS REQUIRED		
SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Water PFAS Full Suite Low Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW270D_251016		16/10/2025 10:41 AM	WATER	ALS: 4 Non ALS: 0	No	X		
002	0908_MW270S_251016		16/10/2025 10:51 AM	WATER	ALS: 4 Non ALS: 0	No	X		

Environmental Division
Sydney
Work Order Reference
ES2532723



Telephone : + 61-2-8784 8555

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOM Project Manager: [REDACTED]
ALS Compass COC Reference: 89413 # Samples: 2 Sampler: [REDACTED]
Phone: [REDACTED] Phone: [REDACTED]

Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILED

LAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact? YES NO N/A
Free ice / frozen ice bricks upon receipt? YES NO N/A
Random sample temperature on receipt? 3 °C

Custody:

Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10/25 1411</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1410</u>	Relinquished by: <u>[REDACTED]</u> Date / Time: <u>16/10 1700</u>	Received by: <u>[REDACTED]</u> Date / Time: <u>16/10 1922</u>
---	--	--	--



CERTIFICATE OF ANALYSIS

Work Order : **ES2532723**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89413**
Sampler : **[REDACTED]**
Site : **Offsite 11**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **2**
No. of samples analysed : **2**

Page : 1 of 5
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **23-Oct-2025**
Issue Date : **27-Oct-2025 13:57**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories

Position

Accreditation Category

[REDACTED]

LCMS Coordinator

Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW270D_25101 6	0908_MW270S_25101 6	----	----	----
Sampling date / time				16-Oct-2025 10:41	16-Oct-2025 10:51	----	----	----
Compound	CAS Number	LOR	Unit	ES2532723-001	ES2532723-002	-----	-----	-----
				Result	Result	----	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	0.243	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	0.061	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	0.205	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	91.7	94.2	----	----	----
13C8-PFOA	----	0.002	%	96.2	95.0	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532723	Page	: 1 of 7
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 23-Oct-2025
C-O-C number	: 89413	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 11		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 2		
No. of samples analysed	: 2		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

RPD = Relative Percentage Difference

= Indicates failed QC

* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	0.034	0.031	7.8	0% - 50%
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	0.009	0.008	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.080	0.084	5.0	0% - 20%
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	0.006	0.007	15.2	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.029	0.027	6.6	0% - 50%
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	0.02	0.02	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	0.013	0.009	38.4	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	0.009	0.008	13.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6949528) - continued									
ES2532717-004	Anonymous	EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	0.275	0.284	3.4	0% - 20%
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	0.708	0.723	2.0	0% - 20%
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	0.068	0.070	2.0	0% - 20%
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	0.034	0.035	3.9	0% - 50%
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	0.002	0.003	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	0.12	0.12	0.0	0% - 50%
ES2532717-004	Anonymous	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6949528) - continued									
ES2532676-001	Anonymous	EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6949528)									
ES2532676-001	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005 (0.008) *	µg/L	1.86	1.67	10.4	0% - 20%
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	0.016	0.018	9.9	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
ES2532717-004	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949528)								
EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	0.025 µg/L	119	70.0	130
EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	0.025 µg/L	101	72.0	130
EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	0.025 µg/L	98.0	71.0	127
EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	0.025 µg/L	128	68.0	131
EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	0.025 µg/L	120	69.0	134
EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	0.025 µg/L	114	65.0	140
EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	0.025 µg/L	77.6	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528)								
EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	0.125 µg/L	98.1	73.0	129
EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	0.025 µg/L	120	72.0	129
EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	0.025 µg/L	121	72.0	130
EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	0.025 µg/L	97.1	71.0	133
EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	0.025 µg/L	123	69.0	130
EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	0.025 µg/L	105	71.0	129
EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	0.025 µg/L	108	69.0	133
EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	0.025 µg/L	90.4	72.0	134
EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	0.025 µg/L	123	65.0	144
EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	0.0625 µg/L	128	71.0	132
EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	0.025 µg/L	108	65.6	133
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	109	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	127	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	105	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	110	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	115	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	117	65.0	136



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528) - continued								
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	102	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	95.5	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	93.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	77.2	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	77.8	75.2	137

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	107	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	99.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	75.0	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	118	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	116	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	104	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	97.7	53.0	142
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	92.1	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	# Not Determined	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	122	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	94.2	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	116	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	87.4	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	106	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	77.7	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.025 µg/L	104	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	110	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	99.8	65.6	133



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	99.0	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	110	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	96.0	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	105	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	111	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	117	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	90.1	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6949528)							
ES2532676-002	Anonymous	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	91.8	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	# Not Determined	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	86.9	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	81.4	75.2	137



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532723	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 11	Issue Date	: 27-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 2
Order number	: 60739111_1.10.2	No. of samples analysed	: 2

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- Matrix Spike outliers exist - please see following pages for full details.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluoropentanoic acid (PFPeA)	2706-90-3	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231B: Perfluoroalkyl Carboxylic Acids	ES2532676--002	Anonymous	Perfluorohexanoic acid (PFHxA)	307-24-4	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231D: (n:2) Fluorotelomer Sulfonic Acids	ES2532676--002	Anonymous	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP231A: Perfluoroalkyl Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_251016,	0908_MW270S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✓	24-Oct-2025	14-Apr-2026	✓
EP231B: Perfluoroalkyl Carboxylic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_251016,	0908_MW270S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✓	24-Oct-2025	14-Apr-2026	✓
EP231C: Perfluoroalkyl Sulfonamides								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_251016,	0908_MW270S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✓	24-Oct-2025	14-Apr-2026	✓
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_251016,	0908_MW270S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✓	24-Oct-2025	14-Apr-2026	✓
EP231P: PFAS Sums								
HDPE (no PTFE) (EP231X-LL) 0908_MW270D_251016,	0908_MW270S_251016	16-Oct-2025	23-Oct-2025	14-Apr-2026	✓	24-Oct-2025	14-Apr-2026	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS)	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2532725**

Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD
NEWCASTLE Newcastle 2304**

E-mail : **[REDACTED]**
Telephone : **----**
Facsimile : **----**

Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**

C-O-C number : **89416**
Site : **Offsite 9**
Sampler : **[REDACTED]**

Laboratory : **Environmental Division Sydney**
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield
NSW Australia 2164**

E-mail : **[REDACTED]**
Telephone : **+61 2 8784 8555**
Facsimile : **+61-2-8784 8500**

Page : **1 of 4**
Quote number : **ES2024AECOMAU0012
(NSW_PFASOMP_25)**
QC Level : **NEPM 2013 B3 & ALS QC Standard**

Dates

Date Samples Received : **16-Oct-2025 14:10**
Client Requested Due : **28-Oct-2025**
Date

Issue Date : **21-Oct-2025**
Scheduled Reporting Date : **28-Oct-2025**

Delivery Details

Mode of Delivery : **Undefined**
No. of coolers/boxes : **1**
Receipt Detail :

Security Seal : **Not Available**
Temperature : **3.0°C - Ice present**
No. of samples received / analysed : **3 / 3**

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Unless otherwise stated, analytical work for this work order will be conducted at ALS Sydney, NATA accreditation no. 825, site no. 10911.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months $\pm$ 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - EP231X PFAS - Full Suite (31 analytes)	WATER - EP231X-LL PFAS - Full Suite (31 analytes) Low Level
ES2532725-001	15-Oct-2025 13:29	0908_MW231D_251015		✓
ES2532725-002	15-Oct-2025 13:41	0908_MW231S_251015	✓	
ES2532725-003	15-Oct-2025 13:15	0908_POT382_251015	✓	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

[REDACTED]	- A4 - AU Tax Invoice (INV)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]
	- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	[REDACTED]
	- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	[REDACTED]
	- Chain of Custody (CoC) (COC)	Email	[REDACTED]
	- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)	Email	[REDACTED]
	- EDI Format - ESDAT (ESDAT)	Email	[REDACTED]
[REDACTED]	- *AU Certificate of Analysis - NATA (COA)	Email	[REDACTED]
	- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	[REDACTED]



- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - EQUIS V5 AECOM (EQUIS_V5_AECOM)
- EDI Format - ESDAT (ESDAT)

Email
Email
Email
Email
Email





ALS Laboratory: ES Sydney
Environmental

RECEIVED

DATE TIME: 01/01/2001 10:00

RECEIVED BY:

DATE TIME:

EMAIL REPORTS TO:

/ ES2024AECOMAU001
2

Other comments:

Biohazard info:

ANALYSIS REQUIRED

SAMPLE	NAME	DESCRIPTION	DATE / TIME	MATRIX	TOTAL BOTTLES	ON HOLD	Water PFAS Full Suite Low Level WATER	Water PFAS Full Suite Standard Level WATER	ALTERNATIVE ANALYSIS	ADDITIONAL INFORMATION
001	0908_MW231D_251015		15/10/2025 01:29 PM	WATER	ALS: 4 Non ALS: 0	No	X			
002	0908_MW231S_251015		15/10/2025 01:41 PM	WATER	ALS: 4 Non ALS: 0	No		X		
003	0908_POT382_251015		15/10/2025 01:15 PM	WATER	ALS: 4 Non ALS: 0	No	X	X		

Work Order Reference
ES2532725



Telephone : - 61-2-8784 8555

Custody Document for Submissions via ALS Compass App

Project: 60739111 Client: AECOMProject Manager: [REDACTED]Phone: ([REDACTED])ALS Compass COC Reference: 89416 # Samples: 3Sampler: [REDACTED]Phone: ([REDACTED])Turnaround Requirements: Standard Urgent

Special Instructions:

E-MAILEDLAB OF ORIGIN:
NEWCASTLE

ALS Use Only

Custody seal intact?

YES NO N/AFree ice / frozen ice bricks upon receipt?YES NO N/A

Random sample temperature on receipt?

3 °C

Custody:

Relinquished by:

[REDACTED]

Date / Time:

16/10/25 1411

Received by:

[REDACTED]

Date / Time:

16/10
1410

Relinquished by:

[REDACTED]

Date / Time:

16/10
1700

Received by:

[REDACTED]

Date / Time:

16/10 1922



CERTIFICATE OF ANALYSIS

Work Order : **ES2532725**
Client : **AECOM AUSTRALIA PTY LTD**
Contact : **[REDACTED]**
Address : **17 WARABROOK BLVD**
NEWCASTLE Newcastle 2304
Telephone : **----**
Project : **NSW_0908_PFASOMP_25**
Order number : **60739111_1.10.2**
C-O-C number : **89416**
Sampler : **[REDACTED]**
Site : **Offsite 9**
Quote number : **NSW_PFASOMP_25**
No. of samples received : **3**
No. of samples analysed : **3**

Page : 1 of 7
Laboratory : Environmental Division Sydney
Contact : **[REDACTED]**
Address : **277-289 Woodpark Road Smithfield NSW Australia 2164**
Telephone : **+61 2 8784 8555**
Date Samples Received : **16-Oct-2025 14:10**
Date Analysis Commenced : **22-Oct-2025**
Issue Date : **28-Oct-2025 09:48**



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20mL or 125mL bottles have been tested in accordance with the QSM5.4 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.
- EP231X - Per- and Polyfluoroalkyl Substances (PFAS): Samples received in 20ml or 125ml bottles have been tested in accordance with the QSM5.3 compliant, NATA accredited method. 60mL or 250mL bottles have been tested to the legacy QSM 5.1 aligned, NATA accredited method.



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25101 5	0908_MW231S_25101 5	0908_POT382_25101 5	----	----
Sampling date / time				15-Oct-2025 13:29	15-Oct-2025 13:41	15-Oct-2025 13:15	----	----
Compound	CAS Number	LOR	Unit	ES2532725-001	ES2532725-002	ES2532725-003	-----	-----
				Result	Result	Result	----	----
EP231A: Perfluoroalkyl Sulfonic Acids								
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	----	<0.01	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	----	<0.02	----	----	----
Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	----	<0.02	----	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	----	<0.02	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	----	<0.01	----	----	----
Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	----	0.002	----	----
Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	----	<0.01	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	----	<0.02	----	----	----
EP231B: Perfluoroalkyl Carboxylic Acids								
Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	----	<0.01	----	----
Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	----	<0.1	----	----	----
Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	----	<0.002	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25101 5	0908_MW231S_25101 5	0908_POT382_25101 5	----	----
Sampling date / time				15-Oct-2025 13:29	15-Oct-2025 13:41	15-Oct-2025 13:15	----	----
Compound	CAS Number	LOR	Unit	ES2532725-001	ES2532725-002	ES2532725-003	-----	-----
Result				Result	Result	Result	----	----

EP231B: Perfluoroalkyl Carboxylic Acids - Continued

Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	----	<0.02	----	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	----	<0.02	----	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	----	<0.02	----	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	----	<0.01	----	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	----	<0.02	----	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	----	<0.02	----	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	----	<0.02	----	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	----	<0.005	----	----
Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	----	<0.05	----	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	----	<0.005	----	----
Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	----	<0.05	----	----	----

EP231C: Perfluoroalkyl Sulfonamides



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25101 5	0908_MW231S_25101 5	0908_POT382_25101 5	----	----
Sampling date / time				15-Oct-2025 13:29	15-Oct-2025 13:41	15-Oct-2025 13:15	----	----
Compound	CAS Number	LOR	Unit	ES2532725-001	ES2532725-002	ES2532725-003	-----	-----
				Result	Result	Result	----	----
EP231C: Perfluoroalkyl Sulfonamides - Continued								
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	----	<0.002	----	----
Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	----	<0.02	----	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	----	<0.005	----	----
N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	----	<0.005	----	----
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	----	<0.005	----	----
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	----	<0.05	----	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	----	<0.005	----	----
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	----	<0.05	----	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	----	<0.002	----	----
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	----	<0.02	----	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	----	<0.002	----	----
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	----	<0.02	----	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	----	<0.005	----	----



Analytical Results

Sub-Matrix: GROUNDWATER
 (Matrix: WATER)

Sample ID

				0908_MW231D_25101 5	0908_MW231S_25101 5	0908_POT382_25101 5	----	----
Sampling date / time				15-Oct-2025 13:29	15-Oct-2025 13:41	15-Oct-2025 13:15	----	----
Compound	CAS Number	LOR	Unit	ES2532725-001	ES2532725-002	ES2532725-003	-----	-----
				Result	Result	Result	----	----
EP231D: (n:2) Fluorotelomer Sulfonic Acids - Continued								
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	----	<0.05	----	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	----	<0.005	----	----
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	----	<0.05	----	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	----	<0.005	----	----
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	----	<0.05	----	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	----	<0.005	----	----
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	----	<0.05	----	----	----
EP231P: PFAS Sums								
Sum of PFAS	----	0.002	µg/L	<0.002	----	0.002	----	----
Sum of PFAS	----	0.01	µg/L	----	<0.01	----	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.002	µg/L	<0.002	----	0.002	----	----
Sum of PFHxS and PFOS	355-46-4/1763-23-1	0.01	µg/L	----	<0.01	----	----	----
Sum of PFAS (WA DER List)	----	0.002	µg/L	<0.002	----	0.002	----	----
Sum of PFAS (WA DER List)	----	0.01	µg/L	----	<0.01	----	----	----
EP231S: PFAS Surrogate								
13C4-PFOS	----	0.002	%	88.3	----	90.2	----	----
13C4-PFOS	----	0.02	%	----	91.3	----	----	----
13C8-PFOA	----	0.002	%	91.8	----	91.6	----	----
13C8-PFOA	----	0.02	%	----	101	----	----	----



Surrogate Control Limits

Sub-Matrix: GROUNDWATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP231S: PFAS Surrogate			
13C4-PFOS	----	60	120
13C8-PFOA	----	60	120



QUALITY CONTROL REPORT

Work Order	: ES2532725	Page	: 1 of 9
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Contact	: [REDACTED]
Address	: 17 WARABROOK BLVD NEWCASTLE Newcastle 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Order number	: 60739111_1.10.2	Date Analysis Commenced	: 22-Oct-2025
C-O-C number	: 89416	Issue Date	: 28-Oct-2025
Sampler	: [REDACTED]		
Site	: Offsite 9		
Quote number	: NSW_PFASOMP_25		
No. of samples received	: 3		
No. of samples analysed	: 3		



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
[REDACTED]	Organic Chemist	Sydney Organics, Smithfield, NSW
[REDACTED]	LCMS Coordinator	Sydney Organics, Smithfield, NSW

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Laboratory Duplicate (DUP) Report

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6953638)									
ES2532725-001	0908_MW231D_251015	EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231A: Perfluoroalkyl Sulfonic Acids (QC Lot: 6953640)									
ES2532725-002	0908_MW231S_251015	EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6953638)									



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6953638) - continued									
ES2532725-001	0908_MW231D_251015	EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.01	µg/L	<0.01	<0.01	0.0	No Limit
EP231B: Perfluoroalkyl Carboxylic Acids (QC Lot: 6953640)									
ES2532725-002	0908_MW231S_251015	EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	<0.01	0.0	No Limit
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotridecanoic acid (PFTTrDA)	72629-94-8	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	<0.1	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6953638)									
ES2532725-001	0908_MW231D_251015	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	<0.002	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	<0.005	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6953638) - continued									
ES2532725-001	0908_MW231D_251015	EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231C: Perfluoroalkyl Sulfonamides (QC Lot: 6953640)									
ES2532725-002	0908_MW231S_251015	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	<0.02	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6953638)									
ES2532725-001	0908_MW231D_251015	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	<0.005	0.0	No Limit
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	<0.005	0.0	No Limit
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QC Lot: 6953640)									
ES2532725-002	0908_MW231S_251015	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	<0.05	0.0	No Limit
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	<0.05	0.0	No Limit
EP231P: PFAS Sums (QC Lot: 6953640)									
ES2532725-002	0908_MW231S_251015	EP231X: Sum of PFAS	----	0.01	µg/L	<0.01	<0.01	0.0	No Limit

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
	Spike	Spike Recovery (%)	Acceptable Limits (%)		
Result	Concentration	LCS	Low	High	
<0.01	0.025 µg/L	100	70.0	130	
<0.002	0.025 µg/L	80.4	72.0	130	
<0.002	0.025 µg/L	86.5	71.0	127	
<0.002	0.025 µg/L	86.1	68.0	131	
<0.002	0.025 µg/L	81.7	69.0	134	
<0.002	0.025 µg/L	83.2	65.0	140	
<0.002	0.025 µg/L	89.6	53.0	142	
<0.02	0.25 µg/L	100	70.0	130	
<0.02	0.25 µg/L	80.4	72.0	130	
<0.02	0.25 µg/L	80.3	71.0	127	
<0.01	0.25 µg/L	93.2	68.0	131	
<0.02	0.25 µg/L	91.9	69.0	134	
<0.01	0.25 µg/L	84.6	65.0	140	
<0.02	0.25 µg/L	80.2	70.0	130	
<0.02	0.25 µg/L	82.2	53.0	142	
<0.01	0.125 µg/L	96.2	73.0	129	
<0.002	0.025 µg/L	102	72.0	129	
<0.002	0.025 µg/L	108	72.0	129	
<0.002	0.025 µg/L	91.8	72.0	130	
<0.002	0.025 µg/L	99.7	71.0	133	
<0.002	0.025 µg/L	96.8	69.0	130	
<0.002	0.025 µg/L	106	71.0	129	
<0.002	0.025 µg/L	107	69.0	133	
<0.002	0.025 µg/L	104	72.0	134	
<0.002	0.025 µg/L	108	65.0	144	
<0.005	0.0625 µg/L	105	71.0	132	
<0.005	0.025 µg/L	98.1	65.6	133	



Sub-Matrix: **WATER**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result			Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6953640) - continued								
EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	0.1	µg/L	<0.1	1.25 µg/L	90.9	73.0	129
EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.02	µg/L	<0.02	0.25 µg/L	95.8	72.0	129
EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.02	µg/L	<0.02	0.25 µg/L	83.8	72.0	129
EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.02	µg/L	<0.02	0.25 µg/L	81.2	72.0	130
EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.01	µg/L	<0.01	0.25 µg/L	91.6	71.0	133
EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.02	µg/L	<0.02	0.25 µg/L	86.0	69.0	130
EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.02	µg/L	<0.02	0.25 µg/L	118	71.0	129
EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.02	µg/L	<0.02	0.25 µg/L	111	69.0	133
EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.02	µg/L	<0.02	0.25 µg/L	104	72.0	134
EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.02	µg/L	<0.02	0.25 µg/L	118	65.0	144
EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.05	µg/L	<0.05	0.625 µg/L	78.7	71.0	132
EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.05	µg/L	<0.05	0.25 µg/L	79.9	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6953638)								
EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.002	µg/L	<0.002	0.025 µg/L	99.9	67.0	137
EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.005	µg/L	<0.005	0.0625 µg/L	105	68.0	141
EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.005	µg/L	<0.005	0.0625 µg/L	101	61.1	139
EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.005	µg/L	<0.005	0.0625 µg/L	114	72.3	128
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.005	µg/L	<0.005	0.0625 µg/L	110	63.2	134
EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.002	µg/L	<0.002	0.025 µg/L	105	65.0	136
EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.002	µg/L	<0.002	0.025 µg/L	96.0	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6953640)								
EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.02	µg/L	<0.02	0.25 µg/L	89.2	67.0	137
EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.05	µg/L	<0.05	0.625 µg/L	90.8	68.0	141
EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.05	µg/L	<0.05	0.625 µg/L	86.5	62.6	147
EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.05	µg/L	<0.05	0.625 µg/L	91.4	66.0	145
EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.05	µg/L	<0.05	0.625 µg/L	96.5	57.6	145
EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.02	µg/L	<0.02	0.25 µg/L	97.8	65.0	136
EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.02	µg/L	<0.02	0.25 µg/L	91.5	61.0	135



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6953638)								
EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.005	µg/L	<0.005	0.025 µg/L	93.5	63.0	143
EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.005	µg/L	<0.005	0.025 µg/L	94.4	64.0	140
EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.005	µg/L	<0.005	0.025 µg/L	103	67.0	138
EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.005	µg/L	<0.005	0.025 µg/L	82.3	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6953640)								
EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.05	µg/L	<0.05	0.25 µg/L	91.3	63.0	143
EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.05	µg/L	<0.05	0.25 µg/L	110	64.0	140
EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.05	µg/L	<0.05	0.25 µg/L	105	67.0	138
EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.05	µg/L	<0.05	0.25 µg/L	77.9	71.4	144

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6953638)							
ES2532725-003	0908_POT382_251015	EP231X-LL: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.025 µg/L	91.4	70.0	130
		EP231X-LL: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.025 µg/L	79.5	72.0	130
		EP231X-LL: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.025 µg/L	83.4	71.0	127
		EP231X-LL: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.025 µg/L	84.3	68.0	131
		EP231X-LL: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.025 µg/L	87.4	69.0	134
		EP231X-LL: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.025 µg/L	92.0	65.0	140
		EP231X-LL: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.025 µg/L	77.1	53.0	142
EP231A: Perfluoroalkyl Sulfonic Acids (QCLot: 6953640)							
ES2532977-004	Anonymous	EP231X: Perfluoropropane sulfonic acid (PFPrS)	423-41-6	0.25 µg/L	106	70.0	130
		EP231X: Perfluorobutane sulfonic acid (PFBS)	375-73-5	0.25 µg/L	87.5	72.0	130
		EP231X: Perfluoropentane sulfonic acid (PFPeS)	2706-91-4	0.25 µg/L	79.9	71.0	127
		EP231X: Perfluorohexane sulfonic acid (PFHxS)	355-46-4	0.25 µg/L	98.4	68.0	131
		EP231X: Perfluoroheptane sulfonic acid (PFHpS)	375-92-8	0.25 µg/L	108	69.0	134
		EP231X: Perfluorooctane sulfonic acid (PFOS)	1763-23-1	0.25 µg/L	92.9	65.0	140
		EP231X: Perfluorononane sulfonic acid (PFNS)	68259-12-1	0.25 µg/L	85.8	70.0	130
EP231X: Perfluorodecane sulfonic acid (PFDS)	335-77-3	0.25 µg/L	87.3	53.0	142		
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6953638)							
ES2532725-003	0908_POT382_251015	EP231X-LL: Perfluorobutanoic acid (PFBA)	375-22-4	0.125 µg/L	93.5	73.0	129
		EP231X-LL: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.025 µg/L	108	72.0	129



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6953638) - continued							
ES2532725-003	0908_POT382_251015	EP231X-LL: Perfluorohexanoic acid (PFHxA)	307-24-4	0.025 µg/L	100	72.0	129
		EP231X-LL: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.025 µg/L	90.4	72.0	130
		EP231X-LL: Perfluorooctanoic acid (PFOA)	335-67-1	0.025 µg/L	96.4	71.0	133
		EP231X-LL: Perfluorononanoic acid (PFNA)	375-95-1	0.025 µg/L	91.7	69.0	130
		EP231X-LL: Perfluorodecanoic acid (PFDA)	335-76-2	0.025 µg/L	102	71.0	129
		EP231X-LL: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.025 µg/L	94.1	69.0	133
		EP231X-LL: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.025 µg/L	92.4	72.0	134
		EP231X-LL: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.025 µg/L	91.2	65.0	144
		EP231X-LL: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.0625 µg/L	104	71.0	132
		EP231X-LL: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.025 µg/L	94.2	65.6	133
EP231B: Perfluoroalkyl Carboxylic Acids (QCLot: 6953640)							
ES2532977-004	Anonymous	EP231X: Perfluorobutanoic acid (PFBA)	375-22-4	1.25 µg/L	97.6	73.0	129
		EP231X: Perfluoropentanoic acid (PFPeA)	2706-90-3	0.25 µg/L	103	72.0	129
		EP231X: Perfluorohexanoic acid (PFHxA)	307-24-4	0.25 µg/L	90.0	72.0	129
		EP231X: Perfluoroheptanoic acid (PFHpA)	375-85-9	0.25 µg/L	86.4	72.0	130
		EP231X: Perfluorooctanoic acid (PFOA)	335-67-1	0.25 µg/L	97.4	71.0	133
		EP231X: Perfluorononanoic acid (PFNA)	375-95-1	0.25 µg/L	94.1	69.0	130
		EP231X: Perfluorodecanoic acid (PFDA)	335-76-2	0.25 µg/L	120	71.0	129
		EP231X: Perfluoroundecanoic acid (PFUnDA)	2058-94-8	0.25 µg/L	120	69.0	133
		EP231X: Perfluorododecanoic acid (PFDoDA)	307-55-1	0.25 µg/L	107	72.0	134
		EP231X: Perfluorotridecanoic acid (PFTrDA)	72629-94-8	0.25 µg/L	120	65.0	144
		EP231X: Perfluorotetradecanoic acid (PFTeDA)	376-06-7	0.625 µg/L	89.9	71.0	132
		EP231X: Perfluorohexadecanoic acid (PFHxDA)	67905-19-5	0.25 µg/L	87.2	62.9	136
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6953638)							
ES2532725-003	0908_POT382_251015	EP231X-LL: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.025 µg/L	98.8	67.0	137
		EP231X-LL: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.0625 µg/L	104	68.0	141
		EP231X-LL: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.0625 µg/L	100	61.1	139
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.0625 µg/L	107	72.3	128
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.0625 µg/L	110	63.2	134
		EP231X-LL: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.025 µg/L	102	65.0	136
		EP231X-LL: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.025 µg/L	98.7	61.0	135
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6953640)							
ES2532977-004	Anonymous	EP231X: Perfluorooctane sulfonamide (FOSA)	754-91-6	0.25 µg/L	98.7	67.0	137



Sub-Matrix: **WATER**

Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP231C: Perfluoroalkyl Sulfonamides (QCLot: 6953640) - continued							
ES2532977-004	Anonymous	EP231X: N-Methyl perfluorooctane sulfonamide (MeFOSA)	31506-32-8	0.625 µg/L	104	68.0	141
		EP231X: N-Ethyl perfluorooctane sulfonamide (EtFOSA)	4151-50-2	0.625 µg/L	100	62.6	147
		EP231X: N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE)	24448-09-7	0.625 µg/L	104	66.0	145
		EP231X: N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	1691-99-2	0.625 µg/L	105	57.6	145
		EP231X: N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	2355-31-9	0.25 µg/L	108	65.0	136
		EP231X: N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	2991-50-6	0.25 µg/L	95.8	61.0	135
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6953638)							
ES2532725-003	0908_POT382_251015	EP231X-LL: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.025 µg/L	98.9	63.0	143
		EP231X-LL: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.025 µg/L	112	64.0	140
		EP231X-LL: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.025 µg/L	93.2	67.0	138
		EP231X-LL: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.025 µg/L	89.4	75.2	137
EP231D: (n:2) Fluorotelomer Sulfonic Acids (QCLot: 6953640)							
ES2532977-004	Anonymous	EP231X: 4:2 Fluorotelomer sulfonic acid (4:2 FTS)	757124-72-4	0.25 µg/L	101	63.0	143
		EP231X: 6:2 Fluorotelomer sulfonic acid (6:2 FTS)	27619-97-2	0.25 µg/L	109	64.0	140
		EP231X: 8:2 Fluorotelomer sulfonic acid (8:2 FTS)	39108-34-4	0.25 µg/L	109	67.0	138
		EP231X: 10:2 Fluorotelomer sulfonic acid (10:2 FTS)	120226-60-0	0.25 µg/L	76.7	71.4	144



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2532725	Page	: 1 of 4
Client	: AECOM AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: [REDACTED]	Telephone	: +61 2 8784 8555
Project	: NSW_0908_PFASOMP_25	Date Samples Received	: 16-Oct-2025
Site	: Offsite 9	Issue Date	: 28-Oct-2025
Sampler	: [REDACTED]	No. of samples received	: 3
Order number	: 60739111_1.10.2	No. of samples analysed	: 3

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, where applicable to the methodology, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.



Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **WATER**

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP231A: Perfluoroalkyl Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_MW231S_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	27-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW231D_251015, 0908_POT382_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	28-Oct-2025	13-Apr-2026	✔
EP231B: Perfluoroalkyl Carboxylic Acids							
HDPE (no PTFE) (EP231X) 0908_MW231S_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	27-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW231D_251015, 0908_POT382_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	28-Oct-2025	13-Apr-2026	✔
EP231C: Perfluoroalkyl Sulfonamides							
HDPE (no PTFE) (EP231X) 0908_MW231S_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	27-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW231D_251015, 0908_POT382_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	28-Oct-2025	13-Apr-2026	✔
EP231D: (n:2) Fluorotelomer Sulfonic Acids							
HDPE (no PTFE) (EP231X) 0908_MW231S_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	27-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW231D_251015, 0908_POT382_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	28-Oct-2025	13-Apr-2026	✔
EP231P: PFAS Sums							
HDPE (no PTFE) (EP231X) 0908_MW231S_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	27-Oct-2025	13-Apr-2026	✔
HDPE (no PTFE) (EP231X-LL) 0908_MW231D_251015, 0908_POT382_251015	15-Oct-2025	24-Oct-2025	13-Apr-2026	✔	28-Oct-2025	13-Apr-2026	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	2	50.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	7	14.29	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	2	50.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	2	50.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	1	2	50.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	1	7	14.29	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Per- and Polyfluoroalkyl Substances (PFAS) by LCMSMS	EP231X	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Per- and Polyfluoroalkyl Substances (PFAS by LCMSMS	EP231X-LL	WATER	In-house: Analysis of fresh and saline waters by solid phase extraction (SPE) followed by negative mode LC-ESI-MS/MS using MRM and isotope dilution or internal standard quantitation. Isotope dilution standards (where commercially available) and surrogates are added to the sample container. The entire contents are transferred to a weak anion exchange (WAX) solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Data quality objectives for internal standard recoveries are based on US EPA method 1633.
Preparation Methods	Method	Matrix	Method Descriptions
Solid Phase Extraction (SPE) for PFAS in water	ORG72	WATER	In-house: Isotopically labelled analogues of target analytes used as internal standards and surrogates are added to the sample container. The entire contents are transferred to a solid phase extraction (SPE) cartridge. The sample container is successively rinsed with aliquots of the elution solvent. The eluted extract is combined with an equal volume of reagent water and a portion is filtered for analysis. Method procedures conform to US DoD QSM 5.3, table B-15 requirements.

SAMPLE RECEIPT ADVICE

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	

Sample Login Details

Your reference	NSW_0908_PFASOMP_25
Envirolab Reference	393324
Date Sample Received	20/10/2025
Date Instructions Received	16/10/2025
Date Results Expected to be Reported	27/10/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3.5
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email:	Email:

Analysis Underway, details on the following page:

Sample ID	AECOM checks	AECOM checks	AECOM checks	PFAS in Soils Extended
0908_QC200_251007	✓	✓	✓	✓
0908_QC203_251007	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.



Attention

12

Information on the printed and signed COC takes precedence over the electronic copy

Enriched Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9310 6200
 393324
 Date Received: 20/10/15
 Time Received: 0855
 Rec: [Redacted]
 Temp: 35°C
 Status: Broken/None

Company	No Organisation has been set as the Licencee
Project ID	NSW_0908_PFASOMP_25
Project Name	PFASOMP: RAAF Base Williamtown 2025
SDG/COC Number	202510_0908_OMP_SD_EL
Request/Version	1/1

Container Summary

SAMPLES	CONTAINER DETAILS
FIELD ID	PLASTIC, JAR, 250ML, NO TEFLON, COOL, 6°C NO TEFLON, COOL, 6°C 250 mL
0908_QC200_251007	1
0908_QC203_251007	1

Container Details

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC200_251007		Plastic, jar, 250mL, No teflon, cool, 6°C	No teflon, cool, 6°C		250 mL	
0908_QC203_251007		Plastic, jar, 250mL, No teflon, cool, 6°C	No teflon, cool, 6°C		250 mL	 00620724014602

393324
20110119


CERTIFICATE OF ANALYSIS 393324

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	
Address	PO Box Q410, QVB Post Office, Sydney, NSW, 1230

Sample Details

Your Reference	<u>NSW_0908_PFASOMP_25</u>
Number of Samples	2 Soil
Date samples received	20/10/2025
Date completed instructions received	16/10/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	27/10/2025
Date of Issue	27/10/2025

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By

Senior Chemist
Asbestos Approved Identifier/Report coordinator
Senior Chemist

Authorised By

Laboratory Manager

PFAS in Soils Extended			
Our Reference		393324-1	393324-2
Your Reference	UNITS	0908_QC200_25 1007	0908_QC203_25 1007
Date Sampled		07/10/2025	07/10/2025
Type of sample		Soil	Soil
Date prepared	-	27/10/2025	27/10/2025
Date analysed	-	27/10/2025	27/10/2025
Perfluorobutanesulfonic acid	µg/kg	<0.1	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.3	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	4.6	0.1
Perfluorodecanesulfonic acid	µg/kg	<0.2	<0.2
Perfluorobutanoic acid	µg/kg	<0.2	<0.2
Perfluoropentanoic acid	µg/kg	<0.2	<0.2
Perfluorohexanoic acid	µg/kg	0.1	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1	<0.1
Perfluorononanoic acid	µg/kg	<0.1	<0.1
Perfluorodecanoic acid	µg/kg	<0.5	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5	<0.5
Perfluorododecanoic acid	µg/kg	<0.5	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5	<0.5
Perfluorotetradecanoic acid	µg/kg	<5	<5
4:2 FTS	µg/kg	<0.1	<0.1
6:2 FTS	µg/kg	<0.1	<0.1
8:2 FTS	µg/kg	<0.2	<0.2
10:2 FTS	µg/kg	<0.2	<0.2
Perfluorooctane sulfonamide	µg/kg	<1	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1	<1
N-Ethyl perfluorooctanesulfonamide	µg/kg	<1	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2	<0.2
Surrogate ¹³ C ₈ PFOS	%	108	98
Surrogate ¹³ C ₂ PFOA	%	97	93
Extracted ISTD ¹³ C ₃ PFBS	%	87	87
Extracted ISTD ¹⁸ O ₂ PFHxS	%	84	85
Extracted ISTD ¹³ C ₄ PFOS	%	88	100

PFAS in Soils Extended			
Our Reference		393324-1	393324-2
Your Reference	UNITS	0908_QC200_25 1007	0908_QC203_25 1007
Date Sampled		07/10/2025	07/10/2025
Type of sample		Soil	Soil
Extracted ISTD ¹³ C ₄ PFBA	%	92	99
Extracted ISTD ¹³ C ₃ PFPeA	%	86	92
Extracted ISTD ¹³ C ₂ PFHxA	%	91	98
Extracted ISTD ¹³ C ₄ PFHpA	%	83	93
Extracted ISTD ¹³ C ₄ PFOA	%	91	97
Extracted ISTD ¹³ C ₅ PFNA	%	86	89
Extracted ISTD ¹³ C ₂ PFDA	%	83	92
Extracted ISTD ¹³ C ₂ PFUnDA	%	62	93
Extracted ISTD ¹³ C ₂ PFDoDA	%	85	106
Extracted ISTD ¹³ C ₂ PFTeDA	%	56	115
Extracted ISTD ¹³ C ₂ 4:2FTS	%	91	92
Extracted ISTD ¹³ C ₂ 6:2FTS	%	89	88
Extracted ISTD ¹³ C ₂ 8:2FTS	%	87	103
Extracted ISTD ¹³ C ₈ FOSA	%	80	106
Extracted ISTD d ₃ N MeFOSA	%	66	89
Extracted ISTD d ₅ N EtFOSA	%	60	92
Extracted ISTD d ₇ N MeFOSE	%	71	90
Extracted ISTD d ₉ N EtFOSE	%	76	91
Extracted ISTD d ₃ N MeFOSAA	%	65	85
Extracted ISTD d ₅ N EtFOSAA	%	84	95
Total Positive PFHxS & PFOS	µg/kg	5.0	0.1
Total Positive PFOS & PFOA	µg/kg	4.6	0.1
Total Positive PFAS	µg/kg	5.0	0.1

Moisture			
Our Reference		393324-1	393324-2
Your Reference	UNITS	0908_QC200_25 1007	0908_QC203_25 1007
Date Sampled		07/10/2025	07/10/2025
Type of sample		Soil	Soil
Date prepared	-	21/10/2025	21/10/2025
Date analysed	-	22/10/2025	22/10/2025
Moisture	%	37	19

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			27/10/2025	[NT]	[NT]	[NT]	[NT]	27/10/2025	[NT]
Date analysed	-			27/10/2025	[NT]	[NT]	[NT]	[NT]	27/10/2025	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	106	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	71	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	112	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	106	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
N-Ethyl perfluorooctanesulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
N-Me perfluorooctanesulfonamidethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
N-Et perfluorooctanesulfonamidethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	108	[NT]
MePerfluorooctanesulfonamidacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	107	[NT]
EtPerfluorooctanesulfonamidacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	111	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	94	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	96	[NT]	[NT]	[NT]	[NT]	101	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	103	[NT]	[NT]	[NT]	[NT]	109	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	118	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	107	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	78	[NT]	[NT]	[NT]	[NT]	74	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	73	[NT]	[NT]	[NT]	[NT]	66	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

SAMPLE RECEIPT ADVICE

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	

Sample Login Details

Your reference	NSW_0908_PFASOMP_25
Envirolab Reference	393326
Date Sample Received	20/10/2025
Date Instructions Received	20/10/2025
Date Results Expected to be Reported	27/10/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	3 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3.5
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email: 	Email:

Analysis Underway, details on the following page:

Sample ID	AECOM checks	AECOM checks	AECOM checks	PFAS in Waters Extended
0908_QC201_251007	✓	✓	✓	✓
0908_QC202_251007	✓	✓	✓	✓
0908_QC207_251009	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.



Attention

123

Date -

Time Received: 07:55
 Receiver: [Redacted]
 Temp: 38.5°C
 Cooling: [Redacted]
 Security: [Redacted]

Company	No Organisation has been set as the Licencee
Project ID	NSW_0908_PFASOMP_25
Project Name	PFASOMP: RAAF Base Williamtown 2025
SDG/COC Number	202510_0908_OMP_SW_EL
Request/Version	1/1

Container Summary

SAMPLES	CONTAINER DETAILS
FIELD ID	PLASTIC, 60mL, No TEFLON, COOL, 6°C No TEFLON, COOL, 6°C 60 mL
0908_QC201_251007	4
0908_QC202_251007	4
0908_QC207_251009	4

Container Details

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC201_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC201_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC201_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC201_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC202_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC202_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC202_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC202_251007		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	

393326
20110125


CERTIFICATE OF ANALYSIS 393326

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	
Address	PO Box Q410, QVB Post Office, Sydney, NSW, 1230

Sample Details

Your Reference	<u>NSW_0908_PFASOMP_25</u>
Number of Samples	3 Water
Date samples received	20/10/2025
Date completed instructions received	20/10/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

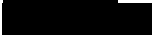
Report Details

Date results requested by	27/10/2025
Date of Issue	23/10/2025

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Results Approved By

 Customer Service Supervisor
 LC/Air Toxics Supervisor

Authorised By

 Laboratory Manager

PFAS in Waters Extended				
Our Reference		393326-1	393326-2	393326-3
Your Reference	UNITS	0908_QC201_25 1007	0908_QC202_25 1007	0908_QC207_25 1009
Date Sampled		07/10/2025	07/10/2025	09/10/2025
Type of sample		Water	Water	Water
Date prepared	-	21/10/2025	21/10/2025	21/10/2025
Date analysed	-	21/10/2025	21/10/2025	21/10/2025
Perfluorobutanesulfonic acid	µg/L	0.02	0.02	0.08
Perfluoropentanesulfonic acid	µg/L	0.02	0.01	0.09
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.24	0.12	0.82
Perfluoroheptanesulfonic acid	µg/L	0.03	<0.01	0.11
Perfluorooctanesulfonic acid PFOS	µg/L	0.97	0.11	1.1
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	0.04
Perfluorohexanoic acid	µg/L	0.03	0.01	0.09
Perfluoroheptanoic acid	µg/L	0.01	<0.01	0.04
Perfluorooctanoic acid PFOA	µg/L	0.02	<0.01	0.09
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02
Surrogate ¹³ C ₈ PFOS	%	102	99	100
Surrogate ¹³ C ₂ PFOA	%	93	98	99
Extracted ISTD ¹³ C ₃ PFBS	%	104	108	103
Extracted ISTD ¹⁸ O ₂ PFHxS	%	116	118	115
Extracted ISTD ¹³ C ₄ PFOS	%	95	96	93

PFAS in Waters Extended				
Our Reference		393326-1	393326-2	393326-3
Your Reference	UNITS	0908_QC201_25 1007	0908_QC202_25 1007	0908_QC207_25 1009
Date Sampled		07/10/2025	07/10/2025	09/10/2025
Type of sample		Water	Water	Water
Extracted ISTD ¹³ C ₄ PFBA	%	107	108	127
Extracted ISTD ¹³ C ₃ PFPeA	%	108	109	105
Extracted ISTD ¹³ C ₂ PFHxA	%	108	111	109
Extracted ISTD ¹³ C ₄ PFHpA	%	85	86	75
Extracted ISTD ¹³ C ₄ PFOA	%	136	140	141
Extracted ISTD ¹³ C ₅ PFNA	%	111	116	115
Extracted ISTD ¹³ C ₂ PFDA	%	104	110	101
Extracted ISTD ¹³ C ₂ PFUnDA	%	99	108	108
Extracted ISTD ¹³ C ₂ PFDoDA	%	101	113	102
Extracted ISTD ¹³ C ₂ PFTeDA	%	112	127	120
Extracted ISTD ¹³ C ₂ 4:2FTS	%	100	109	88
Extracted ISTD ¹³ C ₂ 6:2FTS	%	137	144	150
Extracted ISTD ¹³ C ₂ 8:2FTS	%	129	147	136
Extracted ISTD ¹³ C ₈ FOSA	%	136	140	143
Extracted ISTD d ₃ N MeFOSA	%	112	117	115
Extracted ISTD d ₅ N EtFOSA	%	112	114	111
Extracted ISTD d ₇ N MeFOSE	%	98	103	97
Extracted ISTD d ₉ N EtFOSE	%	106	111	112
Extracted ISTD d ₃ N MeFOSAA	%	105	113	106
Extracted ISTD d ₅ N EtFOSAA	%	122	131	132
Total Positive PFHxS & PFOS	µg/L	1.2	0.23	1.9
Total Positive PFOA & PFOS	µg/L	1.0	0.11	1.2
Total Positive PFAS	µg/L	1.3	0.28	2.5

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PFAS in Waters Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			21/10/2025	[NT]	[NT]	[NT]	[NT]	21/10/2025	[NT]
Date analysed	-			21/10/2025	[NT]	[NT]	[NT]	[NT]	21/10/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	113	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	85	[NT]
4:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	99	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	94	[NT]
10:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	102	[NT]
N-Ethyl perfluorooctanesulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
N-Me perfluorooctanesulfonamidethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	97	[NT]
N-Et perfluorooctanesulfonamidethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
MePerfluorooctanesulfonamidacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	92	[NT]
EtPerfluorooctanesulfonamidacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	88	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	104	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	118	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	122	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	130	[NT]	[NT]	[NT]	[NT]	121	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	129	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	120	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in Waters Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	121	[NT]	[NT]	[NT]	[NT]	125	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

SAMPLE RECEIPT ADVICE

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	

Sample Login Details

Your reference	NSW_0908_PFASMGMT_25
Envirolab Reference	393327
Date Sample Received	20/10/2025
Date Instructions Received	20/10/2025
Date Results Expected to be Reported	27/10/2025

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	8 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	3.5
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Phone: 02 9910 6200	Phone: 02 9910 6200
Fax: 02 9910 6201	Fax: 02 9910 6201
Email:	Email:

Analysis Underway, details on the following page:

Sample ID	AECOM checks	AECOM checks	AECOM checks	PFAS in Waters Extended	PFAS in Water LOW LEVEL Extend
0908_QC204_251008	✓	✓	✓	✓	
0908_QC205_251008	✓	✓	✓		✓
0908_QC206_251009	✓	✓	✓	✓	
0908_QC208_251010	✓	✓	✓	✓	
0908_QC210_251010	✓	✓	✓		✓
0908_QC211_251010	✓	✓	✓		✓
0908_QC212_251010	✓	✓	✓		✓
0908_QC209_251010	✓	✓	✓	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

We acknowledge receipt of your samples and Purchase Order (PO) (if provided). If a PO includes your terms & conditions, Envirolab hereby expressly rejects and will not be bound by any external or third-party terms and conditions, including those referenced or attached to a PO.

All services to be performed by Envirolab will be governed exclusively by Envirolab's General Terms and Conditions attached to this acknowledgement ([Envirolab Terms](#)) via hyperlink or found on our websites.

If you do not object in writing within two (2) business days of the date of this acknowledgement, you will be deemed to have accepted the Envirolab Terms. In addition, your provision of further instructions, additional samples, payment of any invoice, or acceptance of services or results from Envirolab will constitute acceptance of the Envirolab Terms. For clarity, Envirolab's commencement or continuation of work following receipt of the PO is performed solely under the Envirolab Terms and does not constitute acceptance of any external terms. All rights are expressly reserved.



Request / Version 1/2

Lab Contact

Contact

Attention

[illegible]

Con Note -

e-Request Sent

16 Oct 2025 02:42PM

20/10/2025 08:55

Date _____

Information on the printed and signed COC takes precedence over the electronic copy

Updated CoC 22/10/2025
16:49

393327.

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC209_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC209_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC209_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC209_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	

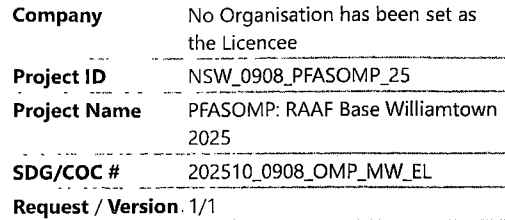


Company	No Organisation has been set as the Licencee
Project ID	NSW_0908_PFASOMP_25
Project Name	PFASOMP: RAAF Base Williamtown 2025
SDG/COC Number	202510_0908_OMP_MW_EL
Request/Version	1/2

Container Summary

SAMPLES	CONTAINER DETAILS
FIELD ID	PLASTIC, 60mL, No TEFLON, COOL, 6°C No TEFLON, COOL, 6°C 60 mL
0908_QC204_251008	4
0908_QC205_251008	4
0908_QC206_251009	4
0908_QC208_251010	4
0908_QC209_251010	4
0908_QC210_251010	4
0908_QC211_251010	4
0909_QC212_251010	4

Container Details



Destination Lab	ENVIROLAB
Lab Quote No	25SY718 - NSW PFASOMP 25 EL
Lab Contact	

Secondary Contact

Attention

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2010-2011

Company	No Organisation has been set as the Licencee
Project ID	NSW_0908_PFASOMP_25
Project Name	PFASOMP: RAAF Base Williamtown 2025
SDG/COC Number	202510_0908_OMP_MW_EL
Request/Version	1/1

Container Summary

SAMPLES	CONTAINER DETAILS	
FIELD ID	PLASTIC, 60ML, No TEFLON, COOL, 6°C	
	No TEFLON, COOL, 6°C	
	60 mL	
0908_QC204_251008		4
0908_QC205_251008		4
0908_QC206_251009		4
0908_QC207_251010		4
0908_QC208_251010		4
0908_QC210_251010		4
0908_QC211_251010		4
0909_QC212_251010		4

Container Details

393327
2011018
[Redacted]

FIELD ID	COLOUR	TYPE	PRESERVATIVE	FILTERED	VOLUME	BARCODE
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC204_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC205_251008		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC206_251009		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC207_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	 00352504030597
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC208_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC210_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0908_QC211_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	
0909_QC212_251010		Plastic, 60mL, No teflon, cool, 6°C	No teflon, cool, 6°C		60 mL	

393327
2010/11

CERTIFICATE OF ANALYSIS 393327

Client Details

Client	AECOM Australia Pty Ltd (Sydney)
Attention	
Address	PO Box Q410, QVB Post Office, Sydney, NSW, 1230

Sample Details

Your Reference	<u>NSW_0908_PFASMGMT_25</u>
Number of Samples	8 Water
Date samples received	20/10/2025
Date completed instructions received	20/10/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client unless as indicated below in the method summaries. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	27/10/2025
Date of Issue	27/10/2025

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Results Approved By

 LC/Air Toxics Supervisor
Senior Chemist
Asbestos Approved Identifier/Report coordinator

Authorised By

 Laboratory Manager

PFAS in Waters Extended					
Our Reference		393327-1	393327-3	393327-4	393327-8
Your Reference	UNITS	0908_QC204_25 1008	0908_QC206_25 1009	0908_QC208_25 1010	0908_QC209_25 1010
Date Sampled		08/10/2025	09/10/2025	10/10/2025	10/10/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	21/10/2025	21/10/2025	21/10/2025	21/10/2025
Date analysed	-	21/10/2025	21/10/2025	21/10/2025	21/10/2025
Perfluorobutanesulfonic acid	µg/L	<0.01	0.08	<0.01	<0.01
Perfluoropentanesulfonic acid	µg/L	<0.01	0.06	<0.01	<0.01
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.07	0.29	0.1	<0.01
Perfluoroheptanesulfonic acid	µg/L	0.01	<0.01	<0.01	<0.01
Perfluorooctanesulfonic acid PFOS	µg/L	<0.01	0.02	3.0	0.02
Perfluorodecanesulfonic acid	µg/L	<0.02	<0.02	<0.02	<0.02
Perfluorobutanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
Perfluoropentanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
Perfluorohexanoic acid	µg/L	0.02	0.06	0.02	<0.01
Perfluoroheptanoic acid	µg/L	<0.01	0.01	<0.01	<0.01
Perfluorooctanoic acid PFOA	µg/L	<0.01	<0.01	0.01	<0.01
Perfluorononanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01
Perfluorodecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
Perfluoroundecanoic acid	µg/L	<0.02	<0.02	<0.02	<0.02
Perfluorododecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05
Perfluorotridecanoic acid	µg/L	<0.1	<0.1	<0.1	<0.1
Perfluorotetradecanoic acid	µg/L	<0.5	<0.5	<0.5	<0.5
4:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01
6:2 FTS	µg/L	<0.01	<0.01	<0.01	<0.01
8:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02
10:2 FTS	µg/L	<0.02	<0.02	<0.02	<0.02
Perfluorooctane sulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.02	<0.02	<0.02	<0.02
Surrogate ¹³ C ₈ PFOS	%	99	106	103	101
Surrogate ¹³ C ₂ PFOA	%	102	102	106	99
Extracted ISTD ¹³ C ₃ PFBS	%	109	114	109	104
Extracted ISTD ¹⁸ O ₂ PFHxS	%	117	121	116	113
Extracted ISTD ¹³ C ₄ PFOS	%	94	96	99	89

PFAS in Waters Extended					
Our Reference		393327-1	393327-3	393327-4	393327-8
Your Reference	UNITS	0908_QC204_25 1008	0908_QC206_25 1009	0908_QC208_25 1010	0908_QC209_25 1010
Date Sampled		08/10/2025	09/10/2025	10/10/2025	10/10/2025
Type of sample		Water	Water	Water	Water
Extracted ISTD ¹³ C ₄ PFBA	%	107	121	115	124
Extracted ISTD ¹³ C ₃ PFPeA	%	106	115	116	103
Extracted ISTD ¹³ C ₂ PFHxA	%	106	108	104	106
Extracted ISTD ¹³ C ₄ PFHpA	%	78	87	90	75
Extracted ISTD ¹³ C ₄ PFOA	%	131	132	128	130
Extracted ISTD ¹³ C ₅ PFNA	%	117	114	114	111
Extracted ISTD ¹³ C ₂ PFDA	%	104	111	112	100
Extracted ISTD ¹³ C ₂ PFUnDA	%	106	109	108	101
Extracted ISTD ¹³ C ₂ PFDoDA	%	104	111	114	102
Extracted ISTD ¹³ C ₂ PFTeDA	%	117	128	131	111
Extracted ISTD ¹³ C ₂ 4:2FTS	%	92	103	110	81
Extracted ISTD ¹³ C ₂ 6:2FTS	%	147	145	144	132
Extracted ISTD ¹³ C ₂ 8:2FTS	%	129	143	139	144
Extracted ISTD ¹³ C ₈ FOSA	%	137	134	132	139
Extracted ISTD d ₃ N MeFOSA	%	118	121	121	116
Extracted ISTD d ₅ N EtFOSA	%	112	118	113	110
Extracted ISTD d ₇ N MeFOSE	%	98	98	103	94
Extracted ISTD d ₉ N EtFOSE	%	110	111	109	108
Extracted ISTD d ₃ N MeFOSAA	%	108	116	119	103
Extracted ISTD d ₅ N EtFOSAA	%	122	138	124	126
Total Positive PFHxS & PFOS	µg/L	0.07	0.31	3.1	0.02
Total Positive PFOA & PFOS	µg/L	<0.01	0.02	3.0	0.02
Total Positive PFAS	µg/L	0.10	0.51	3.2	0.02

PFAS in Water LOW LEVEL Extend					
Our Reference		393327-2	393327-5	393327-6	393327-7
Your Reference	UNITS	0908_QC205_25 1008	0908_QC210_25 1010	0908_QC211_25 1010	0908_QC212_25 1010
Date Sampled		08/10/2025	10/10/2025	10/10/2025	10/10/2025
Type of sample		Water	Water	Water	Water
Date prepared	-	23/10/2025	23/10/2025	23/10/2025	23/10/2025
Date analysed	-	23/10/2025	23/10/2025	23/10/2025	23/10/2025
Perfluorobutanesulfonic acid	µg/L	0.002	<0.001	<0.001	<0.001
Perfluoropentanesulfonic acid	µg/L	0.002	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.009	0.004	0.002	<0.001
Perfluoroheptanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	0.005	<0.001	0.002
Perfluorodecanesulfonic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	µg/L	0.005	<0.004	<0.002	<0.002
Perfluoropentanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorohexanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluoroheptanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorooctanoic acid PFOA	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorononanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	µg/L	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05
4:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001
6:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001
8:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002
10:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.05	<0.05	<0.05	<0.05
N-Ethyl perfluorooctanesulfonamide	µg/L	<0.1	<0.1	<0.1	<0.1
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.5	<0.5	<0.5	<0.5
MePerfluorooctanesulf-amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Surrogate ¹³ C ₈ PFOS	%	103	104	100	96
Surrogate ¹³ C ₂ PFOA	%	74	76	77	79
Extracted ISTD ¹³ C ₃ PFBS	%	64	56	59	67
Extracted ISTD ¹⁸ O ₂ PFHxS	%	93	77	88	88
Extracted ISTD ¹³ C ₄ PFOS	%	93	91	78	77

PFAS in Water LOW LEVEL Extend					
Our Reference		393327-2	393327-5	393327-6	393327-7
Your Reference	UNITS	0908_QC205_25 1008	0908_QC210_25 1010	0908_QC211_25 1010	0908_QC212_25 1010
Date Sampled		08/10/2025	10/10/2025	10/10/2025	10/10/2025
Type of sample		Water	Water	Water	Water
Extracted ISTD ¹³ C ₄ PFBA	%	73	52	73	97
Extracted ISTD ¹³ C ₃ PFPeA	%	43	37	51	69
Extracted ISTD ¹³ C ₂ PFHxA	%	113	101	110	108
Extracted ISTD ¹³ C ₄ PFHpA	%	61	54	59	60
Extracted ISTD ¹³ C ₄ PFOA	%	119	110	129	123
Extracted ISTD ¹³ C ₅ PFNA	%	87	80	97	94
Extracted ISTD ¹³ C ₂ PFDA	%	85	80	89	86
Extracted ISTD ¹³ C ₂ PFUnDA	%	108	104	109	106
Extracted ISTD ¹³ C ₂ PFDoDA	%	114	105	90	93
Extracted ISTD ¹³ C ₂ PFTeDA	%	128	101	69	88
Extracted ISTD ¹³ C ₂ 4:2FTS	%	65	59	78	86
Extracted ISTD ¹³ C ₂ 6:2FTS	%	141	125	163	184
Extracted ISTD ¹³ C ₂ 8:2FTS	%	167	160	183	203
Extracted ISTD ¹³ C ₈ FOSA	%	138	137	141	131
Extracted ISTD d ₃ N MeFOSA	%	123	114	121	119
Extracted ISTD d ₅ N EtFOSA	%	122	111	118	121
Extracted ISTD d ₇ N MeFOSE	%	102	97	103	104
Extracted ISTD d ₉ N EtFOSE	%	117	109	112	110
Extracted ISTD d ₃ N MeFOSAA	%	66	80	111	110
Extracted ISTD d ₅ N EtFOSAA	%	141	139	175	168
Total Positive PFHxS & PFOS	µg/L	0.010	0.009	0.002	0.002
Total Positive PFOA & PFOS	µg/L	0.001	0.005	<0.001	0.002
Total Positive PFAS	µg/L	0.018	0.009	0.002	0.002

Method ID	Methodology Summary
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: PFAS in Waters Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date prepared	-			21/10/2025	[NT]	[NT]	[NT]	[NT]	21/10/2025	[NT]
Date analysed	-			21/10/2025	[NT]	[NT]	[NT]	[NT]	21/10/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluoropentanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorodecanesulfonic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorobutanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluoropentanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorohexanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluoroheptanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	113	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorononanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluorodecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoroundecanoic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	116	[NT]
Perfluorododecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
Perfluorotridecanoic acid	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Perfluorotetradecanoic acid	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	85	[NT]
4:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
6:2 FTS	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	99	[NT]
8:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	94	[NT]
10:2 FTS	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorooctane sulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	91	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	102	[NT]
N-Ethyl perfluorooctanesulfonamide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
N-Me perfluorooctanesulfonamidethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	97	[NT]
N-Et perfluorooctanesulfonamidethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
MePerfluorooctanesulfonamidacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	92	[NT]
EtPerfluorooctanesulfonamidacetic acid	µg/L	0.02	Org-029	<0.02	[NT]	[NT]	[NT]	[NT]	88	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	100	[NT]	[NT]	[NT]	[NT]	104	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	112	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	102	[NT]	[NT]	[NT]	[NT]	100	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	92	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	118	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	110	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	122	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	105	[NT]	[NT]	[NT]	[NT]	104	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	130	[NT]	[NT]	[NT]	[NT]	121	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	129	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	120	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in Waters Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	121	[NT]	[NT]	[NT]	[NT]	125	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Date prepared	-			23/10/2025	[NT]	[NT]	[NT]	[NT]	23/10/2025	[NT]
Date analysed	-			23/10/2025	[NT]	[NT]	[NT]	[NT]	23/10/2025	[NT]
Perfluorobutanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	122	[NT]
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	120	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	86	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	110	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorobutanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluoropentanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	111	[NT]
Perfluorohexanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	69	[NT]
Perfluoroheptanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	129	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	93	[NT]
Perfluorononanoic acid	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluorodecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	92	[NT]
Perfluoroundecanoic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorododecanoic acid	µg/L	0.005	Org-029	<0.005	[NT]	[NT]	[NT]	[NT]	95	[NT]
Perfluorotridecanoic acid	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	75	[NT]
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	85	[NT]
4:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	129	[NT]
6:2 FTS	µg/L	0.001	Org-029	<0.001	[NT]	[NT]	[NT]	[NT]	98	[NT]
8:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	82	[NT]
10:2 FTS	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	<0.01	[NT]	[NT]	[NT]	[NT]	69	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	76	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	64	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	[NT]	[NT]	[NT]	[NT]	109	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	77	[NT]
MePerfluorooctanesulf-amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	102	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	[NT]	[NT]	[NT]	[NT]	83	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	91	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	76	[NT]	[NT]	[NT]	[NT]	74	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	83	[NT]	[NT]	[NT]	[NT]	83	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	67	[NT]	[NT]	[NT]	[NT]	70	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	103	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	82	[NT]	[NT]	[NT]	[NT]	83	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	104	[NT]	[NT]	[NT]	[NT]	102	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	68	[NT]	[NT]	[NT]	[NT]	72	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	115	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	93	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	108	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	93	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	116	[NT]	[NT]	[NT]	[NT]	124	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	99	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	138	[NT]	[NT]	[NT]	[NT]	138	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	137	[NT]	[NT]	[NT]	[NT]	144	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	112	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	110	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: PFAS in Water LOW LEVEL Extend						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	106	[NT]	[NT]	[NT]	[NT]	105	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	87	[NT]	[NT]	[NT]	[NT]	91	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	134	[NT]	[NT]	[NT]	[NT]	132	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

For Dust Deposit Gauge (DDG) analysis the sampling, sampling period and funnel exposure area do not fall under Envirolab's NATA accreditation (unless the Newcastle laboratory where responsible for the sampling), hence the annotation on the DDG units of reporting.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

PFAS in Water LOW LEVEL Extend - For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

Appendix F

Supporting Maps



KEY

- RAAF Base Williamtown
- NSW EPA Investigation Area
- State Conservation Area
- Off-Site Open Channel

Groundwater Areas

- Eastern Area
- Southern Area

Surface Water Regions

- Region 1
- Region 2
- Region 3

AECOM

SCALE
1:46,000

SHEET
1 of 1

TITLE
Figure F2: Assessment Areas and Regions Considered in 2017 HHRA

PROJECT
RAAF BASE WILLIAMTOWN STAGE 2B ENVIRONMENTAL INVESTIGATION
OFF-SITE HUMAN HEALTH RISK ASSESSMENT – 2017

CLIENT
DEPARTMENT OF DEFENCE

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SHEET
1 of 1

COORDINATE SYSTEM
GDA 1994 MGA Zone 56

SIZE
A3



KEY

RAAF Base Williamtown

NSW EPA Investigation Area

State Conservation Area

Off-Site Open Channel

Risk Zone A

Risk Zone B

Risk Zone C

Risk Zone D

AECOM

SCALE
1:45,002

SHEET
1 of 1

TITLE
Figure F19: Risk Zones

PROJECT
RAAF BASE WILLIAMTOWN STAGE 2B ENVIRONMENTAL
INVESTIGATION
OFF-SITE HUMAN HEALTH RISK ASSESSMENT – 2017

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